

US EPA RECORDS CENTER REGION 5



412904

943511

**ANCO PRODUCTS, INC.**

**API**

**Our Energy Saves You Energy.®**

*a subsidiary of **API Group, Inc.*** 



Date May 30, 2011

**Name** Andy McCleery  
**Title** President / CEO  
**Company** Anco Product Inc  
**Address** 2500 South 17<sup>th</sup> Street  
**Address** Elkhart, IN. 46517

To whom it may Concern:

This memo is in response to a request for information Pursuant to Section 104(e) of CERCLA for Lusher Street Groundwater Contamination Site.

Answers to questions as per Enclosure 4.

1. The property at 2500 South 17<sup>th</sup> Street was purchased by Lee Anderson from Dietzgen Corporation July 7, 1977. Anco Products Inc. was already in production at 1627 W Lusher Ave. Elkhart, IN. since 1972 and moved to the new location in 1979. (Appendices A: Property Timeline & B: CHES Preliminary Site Assessment)
2. During the years 1977 to 1985, Trichloroethylene (TCE) was used for cleaning of metal moving parts. Specifically, cleaning mandrels used for manufacturing flexible duct of adhesive build-up.
  - a. The chemical was bought in the liquid, cold vapor state in usually 55 gallon drum increments. (Appendix E: TCE Purchase Documents)
  - b. Purchases were made from the Ashland Chemical Company located in South Bend. (Appendix E: TCE Purchase Documents)
  - c. We have affidavits from former employees testifying to the use of TCE at the time. (Appendix D: Affidavits regarding TCE use at Anco)
  - d. Purchase records show that a total of 2660 gallons of TCE was purchased. (Appendix E: TCE Purchase Documents)
3. Waste Management Units:
  - a. Presently:
    - i. Anco uses a 45 yard compactor for its solid waste disposal. The compactor is serviced by Himco Waste Away group.
    - ii. We also use two 30 yard open top containers for the segregation and collection of OCC and clear plastic recycling.
    - iii. Hydraulic oil waste is removed by Crystal Clean in quantities of one 55 gallon drum a year. Other universal

Anco Products, Inc.  
2500 17th Street  
Elkhart, IN 46517

**Information**  
info@AncoProductsInc.us  
www.AncoProductsInc.com

**Phone**  
574.293.5574  
800.837.ANCO (2626)

**Fax**  
574.295.6235

**APi Group, Inc.**  
www.APiGroupInc.com



waste is also disposed of through Crystal Clean on an as-needed basis.

b. Previously:

- i. Two underground storage tanks (UST) were installed on the property by the previous owner, Dietgzen Corp.. These tanks were constructed of Stainless steel and approximately held 5000 gallons each. The UST's were located at the South end of the building under an area now covered with concrete. Previous investigations have revealed that these were used to store Acetone and Toluene, solvents used in the manufacture of drafting and specialty paper products. In 1989, these UST's were discovered, cleaned, neutralized and efforts began to have them environmentally closed out. Soil samples surrounding the UST's were taken and analyzed for Acetone and Toluene. Four sample wells were installed to monitor and test the ground water on the property for possible contamination. In 1991 the UST's were given approval by IDEM for close-out and filled with an inert material (sand). (Appendices B: CHES Preliminary Site Assessment, H: Tank Assessment, John Wallace & I: UST Closure Notification)

4. As we have previously testified: to the knowledge of Anco Products Inc. there have been no leaks, spills or releases of chlorinated solvents at this facility. (Appendices C: Plews & Shadley response from USA VS Walerko Tool subpoena, L: TCE, TCA Findings 1994, M: Groundwater Sampling & Analysis 1995, & N: Groundwater Sampling & Analysis 1999)

5. Permits

- a. Current and past permits include Part 70 Title V Air Permits numbered and dated as follows: Copies of the permits can be viewed using IDEM CAATS: (Appendix F: Air Permits & History)

<http://www.in.gov/apps/idem/caats/loadPermitApplication.aspx?id=70849180309841Idem>

- i. FESOP 039-6389-00069, issued December 1996
- ii. FESOP minor revision 039-8111-00069, issued August 1997
- iii. T039-9008-00069, issued December 1998
- iv. First Re-opening R039-13210-00069, issued December 2001
- v. Administrative amendment 039-20097-00069, issued September 2005
- vi. T039-17563-00069, issued June, 2007
- vii. Significant Modification 039-28476-00069, issued April, 2010

- b. NPDES permits (Appendix G: NPDES Permits)

- i. INR 00A037
  1. Storm water samples taken July 1993
  2. Pollution Prevention Plan completed Oct 1993
  3. Storm water samples taken July 1994
  4. Storm water samples taken March 1997
- ii. INR210222: No Exposure Exclusion filed Dec. 2009.

6. All information regarding this request is included in the attachments

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and history gathered in previous investigations. (Appendices C: Plew & Shadley response to USA VS Walerko Tool subpoena, J: Continuing Investigation Report April 1993, K: Continuing Investigation Report May 1993, L: TCE, TCA Findings 1994, M: Groundwater Sampling & Analysis 1995, and N: Groundwater Sampling & Analysis 1999)

7. All information regarding this request is included in the attachments and history gathered in previous investigations. (Appendices C: Plew & Shadley response to USA VS Walerko Tool subpoena, J: Continuing Investigation Report April 1993, K: Continuing Investigation Report May 1993, L: TCE, TCA Findings 1994, M: Groundwater Sampling & Analysis 1995, and N: Groundwater Sampling & Analysis 1999)

#### References and Supporting Documents

1. Appendix A: 2500 South 17<sup>th</sup> Street Property Timeline
2. Appendix B: Preliminary Site Assessment performed by CHES Consultants
3. Appendix C: Plews & Shadley reports from subpoena of Anco in USA VS Walerko Tool
4. Appendix D: Affidavits of Mary Wirt and Georgia Shephard regarding TCE at Anco
5. Appendix E: TCE purchase documents requested for Information Sharing & CERCLIS SITES
6. Appendix F: Air Permits: searching under source: Anco Products Inc  
<http://www.in.gov/apps/idem/caats/loadPermitApplication.jsp?id=70849180309841>
7. Appendix G: NPDES Permits INR 00A037 & INR 210222
8. Appendix H: Tank Assessment: John Wallace Inc.
9. Appendix I: UST Closure Notification form
10. Appendix J: Continuing Investigation Report April 1993
11. Appendix K: Continuing Investigation Report May 1993
12. Appendix L: TCE, TCA Findings 1994
13. Appendix M: Groundwater Sampling & Analysis 1995
14. Appendix N: Groundwater Sampling & Analysis 1999

We hope this has answered all your questions to a satisfactory level.

Sincerely,

Andrew McCleery  
President / CEO

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2500 17th Street  
Elkhart, IN 46517

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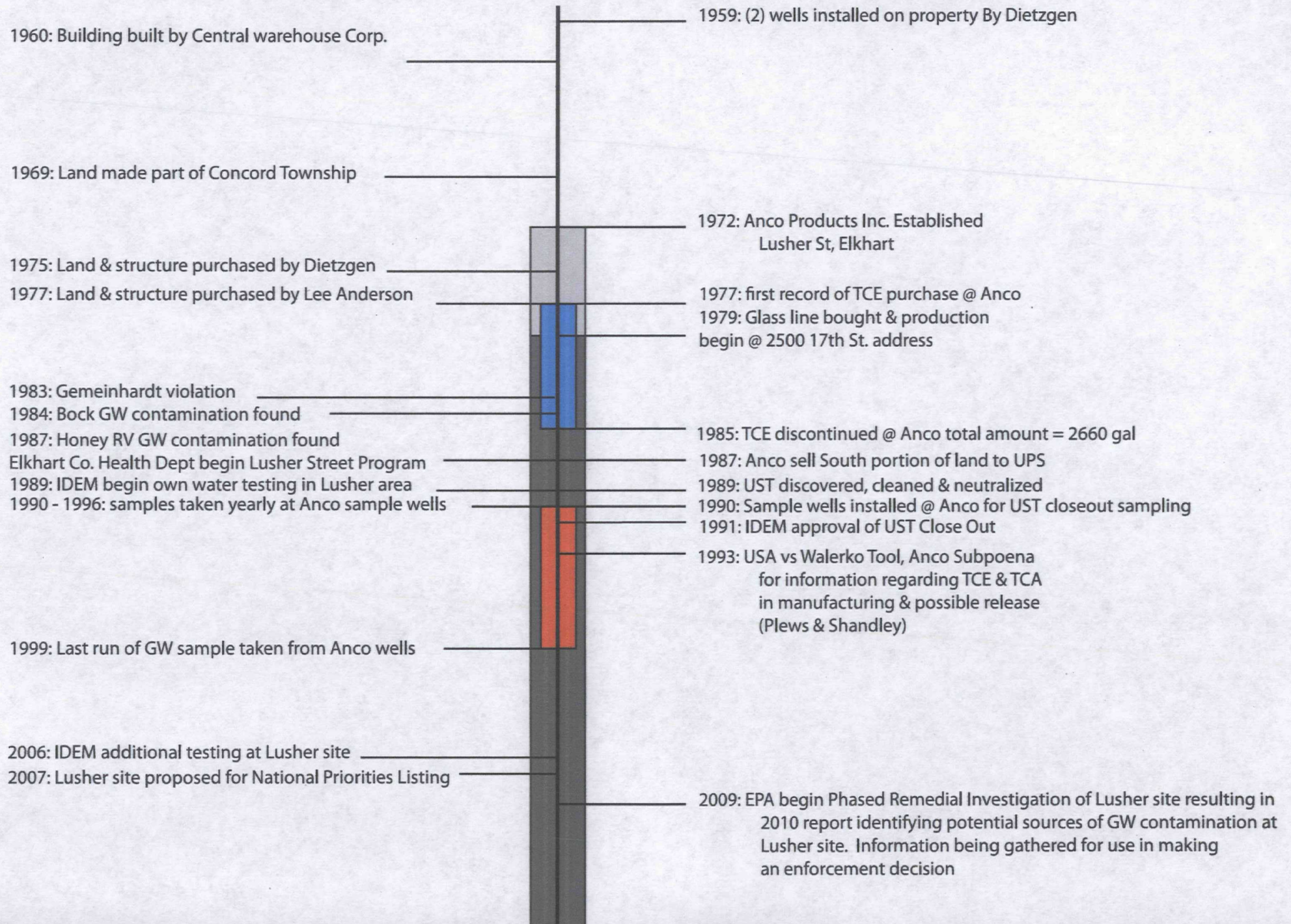
APi Group, Inc.  
www.APiGroupInc.com







## 2500 South 17th, Elkhart, IN. Property Timeline









**PRELIMINARY SITE ASSESSMENT  
ANCO PRODUCTS, INC.  
2500 SOUTH SEVENTEENTH STREET**

INTRODUCTION:

As a result of recent Federal Court interpretation of CERCLA, buyers and lenders, insurers and others establishing more than casual contractual relationship with "owners" of commercial property, may be exposed to serious environmental liability. Parties contemplating contractual relationship should make informed decisions with regard to potential environmental liability.

The use of an environmental audit will provide systematic, documented and objective review of environmental requirements peculiar to the site in question. The information contained herein should provide Anco Products, Incorporated, of Elkhart, Indiana and Mr. Lee Anderson of St. Paul, Minnesota with the necessary information to allow for an informed decision to be made with regard to any possible environmental liability.

PURPOSE:

The purpose of this document is to provide an outline of activities completed and the additional steps necessary for the determination of environmental and subsurface conditions associated with properties;

1) A portion of A parcel of land in the Northeast Quarter of Section 18, Township 37 ex. 1.72A ex.5.34A. 2) Pt Northeast ex. 4.35A ex. .17A ex.14.06A Section 18 5.91A and 3) Pt South 1/2 Northeast 1/4 Section 18 561.3' S N Line S 1/2 Northeast 1/4 160' by 468.78' 1.72A.  
A part of the northeast quarter (NE 1/4) of section eighteen (18), township Thirty-seven (37) North, Range five (5) East, In Concord Township, Elkhart County, Indiana;



Also Known As: 2500 South Seventeen Street, Elkhart, Indiana.

*Objective:* To assess the above-mentioned site for possible soil and groundwater contamination sources and a preliminary risk assessment of any possible source(s) in relation to the extent and seriousness of any possible contamination, with a suggested course of action in relation to the findings.

#### SITE HISTORY

The purpose of conducting a site history research is to try and recognize the contributing factors relevant to the past usage of the property in question.

The building, which appears on the property, was apparently built on or about the year 1960. The purpose and intent of the facility was that of a warehouse for Central Warehouse of Elkhart Indiana.

In July of 1975 the property was transferred to the Dietzgen Corporation who used the facility for paper related manufacturing. The Dietzgen company had installed Underground Storage Tanks for materials related to their manufacturing processes. It was learned through conversations with Mr. Frank Bach of Osceola, Indiana, formerly of Dietzgen Corporation, that the tanks were used for storage of acetone (see attached M.S.D.S., for data concerning product).

#### METHOD:

The site was subjected to a walk-through survey on April 27, 1989. This was to make a visual determination as to the additional steps needed for the completion of project. Through cooperative efforts with public servants associated with the Township Assessor and Records offices, certain factors have been ascertained as to the type of business operations [*as stated previously*] associated with this site over the years.

#### FINDINGS:

The current usage of this property is for the manufacturing of insulating products and flexible air ducts. The facility was found to be using the city sewer system for wastewater disposal and also had city water. It was also learned through conversations with Mr. David Simmons from Indiana's Department of Natural Resources, that a well exists at this facility, installed at the direction of the Dietzgen Company.

It has been learned, through conversations with Mr. Howard Tomlinson, Mr. Gary Luft and Mr. Al Guantino of Anco Products, Incorporated and Mr. Frank Bach formerly of Dietzgen Corporation that two *closed* tanks exist at the south end of the building . It was further learned that the method of closure for these tanks was filling with inert material; filled with sand. This process was believed to of been completed before transfer of property to Mr. Lee R. Anderson.



## DISCUSSION:

In that most recent property acquisition have been marked by concern, due to environmental risk, it has become more and more appropriate to ascertain necessary and cost effective measures for making assurances to all parties involved with the properties in question that all efforts have been made to minimize the associated *environmental liability*. The most effective way of doing is to conduct an audit of the status of the facility with respect to environmental regulations and standards. If there are areas identified with environmental problems, an agreement for the remediation (e.g. cleanup of contaminated areas) that is agreeable to all parties involved, as far as distribution of cost for said cleanup, needs to be developed.

Under CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act), an innocent landowner may avoid liability if he meets the requirements of a third-party defense. To establish *third-party*, you must establish that neither you nor anyone to whom you are contracted to, caused property to become *environmentally unsound (contaminated)*. Those persons under the term "contractual relationship" includes, but is not limited to, land contracts, deeds or other instruments transferring title or possession.

It does not seem likely that the intention of the laws pertaining to environmental liability were intended to suggest that property perceived as a "risk" be allowed to be deemed "unusable", but rather those parties involved establish a "Commitment to follow-up on audit findings".

## RECOMMENDATIONS AND CONCLUSIONS:

There are certain areas of concern that need be addressed;

- \* Subsurface soils and waters associated with the Underground Storage Tanks should be tested to insure that releases have not occurred.

- \* Monitor wells need to be installed at several points to adequately define onsite impact (see attached; proposed work map).

- \* Surface soils should be taken at several areas near the railroad tracks at the east side of the building. This will help assess whether or not "house-keeping" practices have had an adverse impact on the environment (see work map).

- \* Transformer fluids will be sampled to assess the presence of PCBs.

- \* Soils associated with the dust collectors will have to be analyzed.

- \* Metal detection and/or a probing apparatus will be used to determine if tanks exist in the asphalt parking lot, to the north end of the building (see attached work map).



C.H.E.S. Consultants, Incorporated, will assess the condition of tanks and determine, if in fact they have been closed properly. This will be done by accessing the manhole area and allowing adequate time for Ventilation before taking appropriate readings while using a Sensydine Air Sampling unit.

#### CLOSING COMMENTS

Subject to any state of fact that would not be revealed based upon the initial environmental audit, this document fulfills requirements for phased reporting pursuant to EPA policy statement of November 8, 1985, "Environmental Auditing Policy Statement".

Inasmuch as this report is intended to help determine the "environmental risks" with this property, C.H.E.S. Consultants, Incorporated can only recommend procedural steps necessary to minimize that risk. It is the opinion of C.H.E.S. Consultants, Incorporated that further investigation of this site should take place to fully characterize the status of this site. Should it be deemed necessary to enact "sampling and cleanup procedures", C.H.E.S. Consultants, Incorporated can provide the necessary disciplines to conduct such activities.

Activities will begin as soon as possible. Costs for the assessment CAN ONLY BE ESTIMATED ON A TIME AND MATERIALS BASIS, (see attached project costs; well drilling estimates, expenses thus far). C.H.E.S. Consultants, Incor-

porated, will continue to inform you of these costs. Should a problem area be found additional funding may be required to adequately define subsurface conditions.

Submitted by C.H.E.S. Consultants, Incorporated

John C. Wallace, Paralegal for Consultants

Michael Furfaro, Environmental Consultant

May 12, 1989

ATTACHMENTS:

A) PROPOSALS FOR MONITOR WELL INSTALLATION;

- 1) BOWSER & MORNER
- 2) COOK, comparative pricing schedule.

B) ASSESSOR RECORDS

C) MAPS

- 1) PROPOSED PLACEMENT
- 2) OVERHEADS

D) WELL LOGS (DNR)

E) TIME LOG FOR PROJECT

F) PRICING SCHEDULE, C.H.E.S. Consultants, Incorporated

G) ACETONE MSDS

May 12, 1989





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122 S. St. Clair St. • P.O. Box 838 • Toledo, OH 43696-0838 • 419/255-8200

May 5, 1989

C.H.E.S. Consultants  
716 Lincolnway West  
Osceola, Indiana 46561

Attention: Mr. John Wallace

RE: Soil Sampling and Well  
Installations, ANCO Products  
2500 South 17th Street  
Elkhart, Indiana

Gentlemen:

Enclosed is a proposal for the soil sampling and well installations for the above-referenced site. We believe this will cover the various aspects of the work you propose to have BOWSER-MORNER perform.

As you indicated, your firm will prepare a necessary site safety plan and perform necessary monitoring of the work areas. Your firm will have the responsibility for determining when additional personal protective measures are necessary. Our field crew will have the necessary clothing and equipment to provide Level C protection.

If we are informed by May 10, 1989, that we may proceed with this work, we can begin this project on May 15, 1989.

The proposal is a budget estimate and the work will be performed on a time-and-materials basis. We find this to be the best method of working when the exact work scope cannot be determined beforehand.

We thank you for your inquiry, and look forward to working on this project. Please contact the undersigned if you have any questions.

Respectfully submitted,

BOWSER-MORNER ASSOCIATES, INC.

H. Neal Troy  
Senior Environmental Consultant

HNT:jl(11)  
Encls.

BOWSER-MORNER, INC.  
Testing Division

BOWSER-MORNER ASSOCIATES, INC.  
Engineering Division

---

Other	420 Davis Ave. • P.O. Box 51 • Dayton, OH 45401-0051 • 513/253-8805
Locations:	169 E. Reynolds Rd. • P.O. Box 24289 • Lexington, KY 40524-4289 • 606/273-9111



FOUNDED 1911

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122 S. St. Clair St. • P.O. Box 838 • Toledo, OH 43696-0838 • 419/255-8200

May 5, 1989

ANCO Products, Inc.  
2500 South 17th Street  
Elkhart, Indiana 46517

Attention: Mr. Howard Tomlinson

RE: Soil Sampling and Well  
Installations, Elkhart, Indiana  
Quote No. T-2117

Gentlemen:

Pursuant to the request of C.H.E.S. Consultants, BOWSER-MORNER has prepared a cost estimate for the installation of wells and performing soil sampling at your property in Elkhart, Indiana.

The estimate covers the installation of five wells. The wells will be 2 inch I.D., and will be constructed with PVC piping, 10-foot PVC screen, and a 5-foot steel guard pipe with locking cap and lock. The approximate depth of the wells will be 20 to 25 feet. BOWSER-MORNER will develop the wells, but any soil sampling, other than that necessary for logging the well borings, will be at the direction of C.H.E.S. and at a cost set forth in the attached estimate. The total estimated cost involves only the five wells.

To indicate that you accept the scope-of-work, the cost, the attached GENERAL TERMS AND CONDITIONS presented with this proposal, and you authorize us to proceed with this project, please indicate with your signature in the space provided below. Note that before BOWSER-MORNER can deliver our final report, a signed copy of this proposal must be returned to us.

BOWSER-MORNER, INC.  
*Testing Division*

BOWSER-MORNER ASSOCIATES, INC.  
*Engineering Division*

---

Other

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If you have any questions, please contact the undersigned.

Respectfully submitted,

BOWSER-MORNER ASSOCIATES, INC.



H. Neal Troy  
Senior Environmental Consultant

HNT:jl(11)

Encls.

ACCEPT:

By: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_



# UNIT PRICE FEE SCHEDULE

ANCO PRODUCTS, INC.  
ELKHART, INDIANA  
Quote No. T-2117

<u>Item</u>	<u>Estimated Quantity</u>	<u>Unit Price</u>	<u>Extension</u>
Mobilization/demobilization	1	\$700.00	\$ 700.00
Subsistence of crew	2 days	\$120/day	\$ 240.00
Hollow stem auger soil boring: 4 1/4" I.D. *	112.5	\$10.75/ft.	\$1,210.00
Split spoon samples *	23	\$15.00 ea.	\$ 345.00
2" PVC well installation Labor and materials	112.5	\$18.00/ft.	\$2,025.00
Steel guard pipe (6"x5') with locking cap and lock	5	\$160.00 ea.	\$ 800.00
Decontamination time *	2.5 hrs.	\$100.00/hr.	\$ 250.00
Well development *	2.5 hrs.	\$100.00/hr.	\$ 250.00
Decon trailer	2 days	\$125.00/day	\$ 250.00
Access time	0	\$100.00/hr.	--
Stand-by time	0	\$100.00/hr.	--
ESTIMATED TOTAL			<u>\$6,070.00</u> =====

3 Days portal to portal

\* 25% surcharge if Level C protection is used.

\$30/day/man equipment charge for Level C. protection

Hollow stem auger soil boring 3 1/4" I.D., \$9.75/foot

Grouting of soil borings \$7.00/foot





## GENERAL TERMS AND CONDITIONS

THESE SERVICES ARE SUBJECT TO THE FOLLOWING CONDITIONS:

1. Payment. The CLIENT shall pay BOWSER-MORNER within thirty (30) days after receipt of each approved invoice.
2. Standard Performance. In performing the professional services specified herein, BOWSER-MORNER, its officers, agents and employees, will use that degree of care and skill ordinarily exercised under similar circumstances by an independent testing laboratory or consulting engineer in performing such services. THE WARRANTY STATED HEREIN IS EXPRESSLY IN LIEU OF ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, AND IS ALSO EXPRESSLY IN LIEU OF ANY OTHER OBLIGATIONS OR LIABILITY ON THE PART OF BOWSER-MORNER, WHETHER IN CONTRACT, TORT OR OTHERWISE. BOWSER-MORNER NEITHER ASSUMES NOR HAS AUTHORIZED ANY PERSON TO ASSUME FOR IT ANY OTHER WARRANTY OR LIABILITY IN CONNECTION WITH THE SERVICES AND THE REPORTS WHICH IT RENDERS HEREUNDER.
3. Additional Services. BOWSER-MORNER shall provide additional services under this Contract as requested by the CLIENT and shall invoice the CLIENT for these additional services. It is understood that the scope-of-work defined in this Contract is based on the information provided by the CLIENT. If unexpected site conditions are encountered or if additional services are required beyond the defined scope-of-work, BOWSER-MORNER shall make reasonable effort to contact the CLIENT when a change in the scope-of-work is necessary. Work will progress when authorized by the CLIENT or his authorized representative. The CLIENT, by agreeing to the change, also recognizes that the estimated costs or quoted figure may also change.
4. Job Site.
  - (a) CLIENT shall furnish or cause to be furnished to BOWSER-MORNER all documents and information known to OWNER that relate to the identity, location, quantity, nature or characteristics of any hazardous waste at, on or under the site. In addition, OWNER will furnish or cause to be furnished such other reports, data, studies, plans, specifications, documents and other information on surface and subsurface site conditions required by BOWSER-MORNER for proper performance of its services. BOWSER-MORNER shall be entitled to rely upon CLIENT-provided documents and information in performing the services required under this Contract; however, BOWSER-MORNER assumes no responsibility or liability for their accuracy or completeness. CLIENT-provided documents will remain the property of the CLIENT.
  - (b) BOWSER-MORNER shall be responsible only for its activities and the activities of its employees on the job site.
  - (c) BOWSER-MORNER will not direct, supervise or control the work of contractors their subcontractors, nor will it accept liability for the actions of the contractors or their subcontractors.
  - (d) BOWSER-MORNER shall not be responsible for job site safety.
  - (e) BOWSER-MORNER shall not be liable for damage or injury arising from damage to subterranean structures (pipes, tanks, telephone cables, etc.) which are not called to BOWSER-MORNER's attention in writing and correctly shown on plans furnished.
5. Disposal of Contaminated Material. It is understood and agreed that BOWSER-MORNER is not, and has not responsibility as a handler, generator, operator, treator or storer, transporter or disposer of hazardous or toxic substances found or identified at a site. It is understood that CLIENT hereby instructs BOWSER-MORNER to make arrangements, as CLIENT's agent, for appropriate transportation and disposal of samples with appropriate licensed parties. CLIENT agrees to remunerate BOWSER-MORNER for services rendered and costs incurred for transportation and disposal of contaminated samples.
6. Limit of Liability. If BOWSER-MORNER shall be found liable for any direct loss or damage attributable to breach of its warranty hereunder, or for any breach of contract, expressed or implied, or for any degree of negligence, whether by malfeasance, misfeasance, or nonfeasance, and whether active or passive, then, in such event, under all circumstances, BOWSER-MORNER's liability shall be limited to payment of any direct damages in an amount not to exceed the contract price hereunder. In no event shall BOWSER-MORNER be liable for any special, indirect, punitive, consequential or economic damages, including but not limited to damages for loss of use, loss of profits, loss of investment, or otherwise resulting from the services and reports it renders hereunder.
7. Waiver. CLIENT expressly waives any other right of recovery and agrees that any payment by BOWSER-MORNER hereunder shall be the sole and exclusive remedy of CLIENT and others.
8. Release. Except as set forth at paragraph 6 hereunder, CLIENT hereby releases BOWSER-MORNER, its employees, agents and successors, from direct or indirect liability based on any other rights of recovery that it may have.
9. Delay in Performance. BOWSER-MORNER shall diligently perform its work under this Contract within the time limits specified; however, BOWSER-MORNER shall not be liable for failure or delay in performance of its services due to acts of God, labor disputes or shortages, fire, flood or other casualty, governmental regulations or requirements, shortages or failure of raw materials, supplies, fuel, power or transportation, breakdown of equipment, or any causes beyond reasonable control.
10. Objections to Service. Claims for CLIENT must be made promptly and BOWSER-MORNER given an opportunity to investigate.
11. Reports. BOWSER-MORNER shall consider all reports to be the confidential property of CLIENT and distribute reports only to those persons, organizations or agencies specifically designated in writing by the CLIENT or their authorized representative.
12. Insurance. BOWSER-MORNER shall furnish and keep in full force and effect at all times during the term of this Contract Workers' Compensation insurance covering all employees of BOWSER-MORNER, its agents and its consultants.

**BOWSER  
MORNER**



FOUNDED 1911

---

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May 5, 1989

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Attention: Mr. Howard Tomlinson

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Quote No. T-2117

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To indicate that you accept the scope-of-work, the cost, the attached GENERAL TERMS AND CONDITIONS presented with this proposal, and you authorize us to proceed with this project, please indicate with your signature in the space provided below. Note that before BOWSER-MORNER can deliver our final report, a signed copy of this proposal must be returned to us.

BOWSER-MORNER, INC.  
*Testing Division*

BOWSER-MORNER ASSOCIATES, INC.  
*Engineering Division*

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Other

420 Davis Ave. • P.O. Box 51 • Dayton, OH 45401-0051 • 513/253-8805

Locations:

169 E. Reynolds Rd. • P.O. Box 24289 • Lexington, KY 40524-4289 • 606/273-9111



If you have any questions, please contact the undersigned.

Respectfully submitted,

BOWSER-MORNER ASSOCIATES, INC.



H. Neal Troy  
Senior Environmental Consultant

HNT:jl(11)

Encls.

ACCEPT:

By: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_



# UNIT PRICE FEE SCHEDULE

ANCO PRODUCTS, INC.  
ELKHART, INDIANA  
Quote No. T-2117

<u>Item</u>	<u>Estimated Quantity</u>	<u>Unit Price</u>	<u>Extension</u>
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Subsistence of crew	2 days	\$120/day	\$ 240.00
Hollow stem auger soil boring: 4 1/4" I.D. *	112.5	\$10.75/ft.	\$1,210.00
Split spoon samples *	23	\$15.00 ea.	\$ 345.00
2" PVC well installation Labor and materials	112.5	\$18.00/ft.	\$2,025.00
Steel guard pipe (6"x5') with locking cap and lock	5	\$160.00 ea.	\$ 800.00
Decontamination time *	2.5 hrs.	\$100.00/hr.	\$ 250.00
Well development *	2.5 hrs.	\$100.00/hr.	\$ 250.00
Decon trailer	2 days	\$125.00/day	\$ 250.00
Access time	0	\$100.00/hr.	--
Stand-by time	0	\$100.00/hr.	--
ESTIMATED TOTAL			<u>\$6,070.00</u> =====

3 Days portal to portal

\* 25% surcharge if Level C protection is used.

\$30/day/man equipment charge for Level C. protection

Hollow stem auger soil boring 3 1/4" I.D., \$9.75/foot

Grouting of soil borings \$7.00/foot



# COOK DRILLING CO.

Bus: 1119 South Bend Avenue  
South Bend, Indiana 46617  
(219) 233-6820

Res: 2410 Weaver Road  
Niles, MI 49120  
(616) 684-6269

## PRICE LIST - October 1988

1. Conventional Drilling with standard penetration tests,  
hollow stem or flight augers:

0.0 - 30.0'	6.00 ft.
0.0 - 50.0'	6.25 ft.
0.0 - 65.0'	6.85 ft.
0.0 - 80.0'	7.90 ft.
0.0 - 100.0'	8.75 ft.
100.0 & over	9.50 ft.
- . Additional sampling after 15' other than 5' intervals: \$15.00 per sample.
2. No additional charge for wash boring. For rotary drilling with fluids add to the above charges: .....1.25 ft.
3. Mobilization. A round trip charge for drill rig and support vehicle from shop to shop.....1.50 mi.  
Additional vehicle (for hauling large quantities of pipe, backfill materials, extra water tank, etc.) Client will be asked to approve before proceeding.....1.00 mi.
4. Crew subsistence. (Per diem) over 75 miles from South Bend, Indiana.  
Per two man crew.....80.00 day  
Per three man crew.....100.00 day
5. Rig time (also standby or delay time).....90.00 hr.
6. Auger borings or probes.....3.50 ft.
7. Concrete coring. Time begins with loading of core tools and accessories;  
time ends with unloading.....60.00 hr.
8. Shelby tube sampling (2" & 3" - includes tube and wax sealant)

0.0 - 30.0'	40.00 ea.
30.0 - 50.0'	46.00 ea.
50.0 - 65.0'	53.00 ea.
65.0 - 80.0'	60.00 ea.
80.0 - 100.0'	68.00 ea.
100.0 & over	80.00 ea.
9. OBSERVATION WELLS - Installation and Grouting  
Wells installed without special backfilling requirements such as cement or grout will be charged on a time and materials basis.  
Wells backfilled using tremie pipe with cement or cement/bentonite mix:

0.0 - 30.0'	125.00 ea.
30.0 - 50.0'	175.00 ea.
50.0 - 80.0'	225.00 ea.
80.0 - 100.0'	300.00 ea.
100.0' & over	time & materials
10. Protective cover installation: 4".....115.00 ea.  
6".....150.00 ea.
11. Steam cleaning (augers, samplers, drill rod, etc.)..... 175.00 per hole

SPLIT • SPOON SAMPLING • MONITORING WELLS • CORE DRILLING • CONCRETE CORING



# COOK DRILLING CO.

Bus: 1119 South Bend Avenue  
South Bend, Indiana 46617  
(219) 233-6820

Res: 2410 Weaver Road  
Niles, MI 49120  
(616) 684-6269

October, 1988

The following prices are for 2" PVC observation wells with 10' .006 - .010 inch slot screens. Other items that these prices includes are as follows:

- a) 2" PVC riser extending 2' above ground surface
- b) 4" protective casing with 2'X 2' concrete pad installed
- c) 2" PVC plug and cap
- d) Well grouting (from top of screen to surface using bentonite and cement mix)
- e) Well development (when static water depth permits using Moyno 3L6 pump or equivalent; 30 min.)

When total depths of wells fall between the footage breakdowns listed below, the next higher price will be charged.  
(Example: 27.5' well cost: 600.00)

<u>Well depth</u>	<u>3' sampling intervals</u>	<u>Continous sampling</u>
0-15'	390.00	390.00
20'	430.00	450.00
25'	500.00	525.00
30'	575.00	600.00
35'	630.00	690.00
40'	725.00	790.00
45'	785.00	925.00
50'	835.00	1000.00
55'	1000.00	1175.00
60'	1075.00	1275.00
65'	1150.00	1375.00
70'	1225.00	1450.00

In the event that sand packs are needed, the well price will reflect the time and materials needed for installation.

Wells in excess of 70' will be quoted.

SPLIT • SPOON SAMPLING • MONITORING WELLS • CORE DRILLING • CONCRETE CORING

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(616) 684-6269

## SOIL BORING AND GROUTING PRICE LIST - OCTOBER, 1988

<u>Depth</u>	<u>3' sampling no grout</u>	<u>Grouted</u>	<u>Continuous sampling no grout</u>	<u>Grouted</u>
15'	82.50	207.50	90.00	215.00
20'	110.00	235.00	120.00	245.00
25'	137.50	262.50	187.50	312.50
30'	165.00	290.00	232.50	357.00
35'	218.75	368.75	300.00	450.00
40'	250.00	400.00	362.00	512.00
45'	281.25	456.00	490.00	639.00
50'	312.50	487.50	552.50	702.50
55'	385.00	560.00	664.75	839.75
60'	420.00	610.00	731.00	906.00
65'	455.00	650.00	830.00	1005.00
70'	525.00	725.00	880.00	1100.00
75'	600.00	825.00	1040.00	1265.00
80'	675.00	900.00	1100.00	1325.00
85'	750.00	1050.00	1240.00	1490.00
90'	810.00	1110.00	1360.00	1650.00

This indenture witnesseth that

DIETZGEN CORPORATION,  
a Delaware corporation

of COOK

County in the State of ILLINOIS

Conveys and warrants to

LEE R. ANDERSON  
2366 Rose Place  
St. Paul, Minnesota 55113

of RAMSEY

County in the State of MINNESOTA

for and in consideration of One Dollar (\$1.00) and other valuable consideration  
the receipt whereof is hereby acknowledged, the following Real Estate in Elkhart  
in the State of Indiana, to wit:

A part of the northeast quarter (NE 1/4) of Section eighteen (18), Township  
Thirty-seven (37) North, Range five (5) East, in Concord Township, Elkhart  
County, Indiana, more particularly described as follows:

Beginning at the southwest corner of said quarter section; thence northwardly  
along the west line of said quarter section, one thousand two hundred ninety-  
four and three tenths (1294.3) feet to a point that is thirty (30) feet south  
of the north line of the south half (S 1/2) of said quarter section; thence  
eastwardly parallel with the north line of said South half (S 1/2) of said  
quarter section, eight hundred twenty and three hundredths (820.03) feet; thence  
southwardly parallel with the west line of said quarter section, one thousand  
two hundred ninety-four and forty-two hundredths (1294.42) feet to the south  
line of said quarter section; thence westwardly along the south line of said  
quarter section eight hundred twenty and three hundredths (820.03) feet to the  
place of beginning; containing approximately twenty-four and ninety-three hun-  
dredths (24.93) acres of land.

Excepting the south thirty (30) feet which is used as a part of Hively Avenue  
and excepting the west thirty (30) feet which is used as a part of Seventeenth  
Street.

Subject to the easement of the New York Central Railroad (now Penn-Central  
Railroad).

Subject to all taxes, assessments and restrictions of record, if any.

The Grantor herein hereby certifies that it is the successor by name change to  
Eugene Dietzgen Co., a Delaware corporation and that Eugene Dietzgen Co., and  
Dietzgen Corporation are one and the same entity.

The Grantor herein hereby certifies under oath that no Indiana Gross Income  
Tax is due or payable as a result of this conveyance and transaction.

State of Indiana, Elkhart County, ss:

Before me, the undersigned, a Notary Public in and for said County  
and State, this 10 day of JUNE 1977 personally appeared:

DIETZGEN CORPORATION, a Delaware  
corporation, by WILLIAM C. PETERSON,  
its President and R. A. GLAB, its  
Secretary and who for and on  
behalf of said corporation,

Dated this 10 Day of June 1977  
DIETZGEN CORPORATION

BY William C. Peterson, President Seal

Attest:

R. A. Glab, Secretary Seal

I hereby acknowledged the execution of the foregoing deed. In witness  
whereof, I have hereunto subscribed my name and affixed my official  
seal. My commission expires Sept. 15 1979

Geoffrey K. Church Notary Public

Prepared by the law office of Slabaugh, Cosentino & Walker by Michael A. Cosentino

Member of Elkhart County Indiana Bar Association

MAIL TO:

COPYRIGHT MAY 1963, ST. JOSEPH COUNTY INDIANA BAR ASSOCIATION



T.D.	Twp.	Sec. No.	Block	Parcel
26	06	18	251	020

251-003

In NE 24 1.72A ex 5.34 A  
Sec. 18 7.0 A

Owner's Name TU 7-6-77-24

Property Address

Date

Transfe  
No.

Anderson, Lee

5-19-56-7 373A-16607	DATE	TRANSFER NUMBER	25	06	18	251	001
Pt NE ex 4.35A ex .17A ex 14.06A Sec 18 5.91A	5-7-69	And 3358	from Conc. Sup. 5-175-				
	7-15-75	8175	Dietzgen Corporation				
	7-6-77	24	Lee Anderson				
	Committed #21	45	Jan 1, '80				
CENTRAL WAREHOUSE CORP., IND 2500 S. 17th ST. ELKHART, IND.	Agreement		per School Districts				

POSTING DATE	REFERENCE	A/L	LAND/LOT	IMPROVEMENTS	GROSS VALUATION	EXEMPTIONS KIND	AMOUNT	NET VALUATION	TAX
3-1-70		A	7870	143930	151800	m	1000	150800	
3-1-71		A	7870	143930	151800	m	1000	150800	
3-1-72		A	7870	146620	154490	m	1000	153490	
3-1-73		A	7870	146620	154490	m	1000	153490	
3-1-74		A	7870	146620	154490	m	1000	153490	
3-1-75		A	7870	146620	154490	m	1000	153490	
3-1-76	OVER	A	7870	146620	154490			154490	
3-1-76	D.T. Assm't	A	14980	146620	161400			161400	
3-1-76	B/R	H	7870	146620	154490			154490	OVER

FORM 7-1

APPROVED BY STATE BOARD OF ACCOUNTS FOR ELKHART COUNTY - 1961

5-19-56-7 373A-16608	DATE	TRANSFER NUMBER	26	25	06	18	251	002
Pt S 1/2 NE 1/4 Sec 18 561.3'S N Line S 1/2 NE 1/4 160'x468.78' 1.72A	5-7-69	And 3358	from Conc. Sup. 5-1754-1					
	7-15-75	8175	Dietzgen Corporation					
	7-6-77	24	Lee Anderson					
	Committed #21	45	Jan 1, '80					
CENTRAL WAREHOUSE CORP., 2500 S. 17th ST. ELKHART, IND.	Agreement		per School Districts					

POSTING DATE	REFERENCE	A/L	LAND/LOT	IMPROVEMENTS	GROSS VALUATION	EXEMPTIONS KIND	AMOUNT	NET VALUATION	TAX
3-1-70		A	860		860			860	
3-1-76	D.T. Assm't	A	2870		2870			2870	
3-1-76	B/R	H	860		860			860	
3-1-76	S/R	H	1290		1290			1290	

FORM 7-1

APPROVED BY STATE BOARD OF ACCOUNTS FOR ELKHART COUNTY - 1961

[illegible]

## RESIDENTIAL BUILDINGS

OCCUPANCY		STORY HEIGHT	ATTIC	BSMT	CRAWL
SINGLE FAMILY			NONE	NONE	
DUPLY		2	UNFINISHED		
TRIPLEX			FINISHED		
CAFAMILY		ORLEVEL	FINISHED		
APARTMENT		COMPLET	UNFINISHED		NO CRAWL

CONSTRUCTION	BASE AREA	FLOOR LEVEL	FIN. LIVING AREA	VALUE
FRAME OR ALUM.				
STUCCO				
TILE				
CONCRETE BLOCK				
METAL				
CONCRETE				
BRICK		ATTIC		
STONE				
FRAME W/MAS.		BSMT CRAWL		

OFING		TOTAL BASE	±
HALT SHINGLES		ROW TYPE ADJUSTMENT	%
ITE OR TILE			

TAL				SUB-TOTAL		
DOORS		8	1	UP	UNFINISHED INTERIOR	
					EXTRA LIVING UNITS	

17TH					ENTR. LIVING DINING	
18					REC. ROOM	
3 & JOISTS					FIREPLACE	

WOOD OR FIR					NO HEATING	
QUET					AIR CONDITIONING	

NO PLUMBING			
BASE PLBG. [-] __ __			
BASE PLBG. [+]			

1. FINISH	B	1	A		
STR OR D.W.					
VELING					
ERBOARD					
				SUB-TOTAL, ONE UNIT	

ERBOARD					SUB-TOTAL, __ UNITS	
FINISHED					GARAGES & CARPORTS	
<b>COMMODATIONS</b>					EXTENSION FEATURES	

NUMBER OF ROOMS		EXTERIOR FEATURES	
DORMS		SUB-TOTAL	
DAILY ROOM		GRADE & DESIGN FACTOR	

FORMAL DINING ROOM				%
			[ ]	
BED ROOM TYPE			REPRODUCTION COST	

2. ROOM	SIZE		COST FACTOR	
EPLACE	STACKS		REPRODUCTION COST	
	OPENINGS			

ATING	BASE	REMODELING & MODERNIZATION	
HEATING		EXTERIOR	
VENTRAL WARM AIR		INTERIOR	

V. OR STEAM			
VENTRAL AIR COND.		KITCHEN	
WATERING		BATH FACILITIES	

PLUMBING	BASE	PLUMBING SYSTEM
PLUMBING		
TER ONLY		HEATING SYSTEM
1 BATHS		ELECTRICAL SYSTEM

EL BATHS		ELECTRICAL SYSTEM	
LF BATHS		TENSIONS	
C. & LAVS.			

Hand-drawn sketch map of a property layout. The map shows a large rectangular area divided into several sections. A north arrow points towards the top right. Key features include:

- Top-left section: Labeled "200" and "(B)".
- Top-right section: Labeled "15CB" and "(109400)".
- Central section: Labeled "46 (A)" and "(5079)".
- Bottom-left section: Labeled "105" and "6".
- Bottom-right section: Labeled "20", "50", and "110".
- Section to the right of the central area: Labeled "40".
- A line labeled "INT. TRUCK WASH" runs horizontally across the bottom right.
- A circled number "1000" is located at the bottom right.
- The name "JAN Noble" and "OWTE N" are written at the bottom left.

SPECIAL FEATURES FOR COMMERCIAL/INDUSTRIAL BUILDINGS		
QTY	ITEM DESCRIPTION	VALUE
	PINT Hse covered in PINT	
TOTAL (TO BE CARRIED TO PRICING LADDER) —————→		

[illegible]

## COMMERCIAL/INDUSTRIAL BUILDING

<b>WALLS</b>		<b>ROOFING</b>		<b>PRICING KEY</b>		<b>2-7-70</b>		<b>1-1-70</b>	
BRICK	A	RULE 1 UP	R	S. F. AREA	5070	1-1-70	1-1-70	1-1-70	1-1-70
STONE		METAL		EFF PERIMETER	100	1-1-70	1-1-70	1-1-70	1-1-70
CONCRETE		SLATE/TILE		PERIM. AREA RATIO	3				
WO/MTL.		SHINGLE		NUMBER OF UNITS					
CB/HIE	B			AVE. UNIT SIZE					
		INSUL.		FLOOR		HIGH	RATE	HIGH	RATE
<b>FRAMING</b>		B	1	2	UP				
WOOD JOIST									
FIRE RESIST									
FIRE PROOF									
<b>FLOORS</b>									
CONCRETE		B							
WOOD									
TILE									
<b>FINISH TYPE</b>									
UNFINISHED									
SEMI FINISHED									
FINISHED OPEN									
FIN. DIVIDED									
<b>USE</b>									
STORE									
OFFICE									
APARTMENT									
Factory									
VACANT									
ABANDONED									
<b>HEATING &amp; A.C.</b>									
NO HEATING									
CEIL. WARM AIR									
H.W. OR STEAM									
UNIT HEATING									
CENTRAL AIR									
PKG/UNIT AIR									
<b>PLUMBING</b>									
FULL BATHS									
HALF BATHS									
OTHER FIXT.									
<b>SPRINKLER</b>									
					BSMT.				
					FIRST	14.70	20.10	2.30	
					SECOND				
					BASE PRICE	14.70	10.10		
					B.P.A. %	100%	100%		
					SUB. TOTAL	14.70	10.10		
					UNIT FINISH				
					INTERIOR FINISH				
					DIV. WALLS				
					LIGHTING				
					HEATING & A.C.	1.23			
					SPRINKLER				
					S.T./G.F. PRICE				
					AREA CUBAGE				
					SUB-TOTAL	107.50	114.20		
					PLUMBING	1.23			
					SPECIAL FEATURES				
					EXTERIOR FEAT.				
					TOTAL BASE	123.50	114.20		
					G/D FACTOR %	100	100		
					REPRO. COST	123.50	1.144200		
					COST FACTOR				
					REPRO. COST	123.50	1.144200		

## SUMMARY OF IMPROVEMENTS

[illegible]

[illegible]



# BUILDING RECORD

CONSTRUCTION SPECIFICATIONS						COMMERCIAL COMPUTATIONS										
OCCUPANCY			PLUMBING			WL. HT.	BLDG. A	BLDG. B	WL. HT.							
1 VAC. LOT	2 DWELLING	3 OTHER	PLUMBING													
<b>BASEMENT</b>			STANDARD													
1 2 3 4 5			BATHROOM													
SLAB CRAWL PART HALF FULL			TOILET ROOM													
SIZE			SINK/LAVATORY			SUB TOTAL										
<b>HEATING</b>			WATER CLOSET			%										
1 2 3			WATER HEATER			BASE PRICE										
NONE BASE AIRCON			URINAL			B.P.A. %										
WARM AIR						FRONT										
HOT WATER/STEAM			NO PLUMBING			HTG-A.C.										
FLOOR FURNACE			<b>ATTIC</b>			LIGHTING										
UNIT HEATERS			1 2 3 4			PLUMBING										
			NONE UNFIN. HALF FULL			PARTITIONS										
<b>WALLS</b>			<b>OTHER FEATURES</b>			FLOORS										
FRAME-STUCCO			PART MASONRY WALLS			ELEVATOR										
CONCRETE BLOCK			FIREPLACE			SPRINKLER										
BRICK/STONE			MODERN KITCHEN													
PLATE GLASS FRONT			FINISHED BASEMENT			S.F. PRICE										
<b>ROOF</b>						AREA										
SHINGLE-ASPHALT/ASBESTOS						SUBTOTAL										
SLATE/TILE			<b>DWELLING COMPUTATIONS</b>			ADDNS.										
COMP. ON WD/STL FRAMING			UNIT AMOUNT			TOTAL BASE										
METAL			S.F.			COUNTY FACTOR										
			BASEMENT			REPL. VALUE										
<b>FLOORS</b>						BUILDING TYPE	NO.	CONSTRUCTION	SIZE	UNIT VALUE	GRADE	AGE	CDU	REPL. VALUE	DEPR.	TRUE CASH VAL
B 1 2 3			HEATING			DWELLING										
CONCRETE			PLUMBING			GARAGE	(F)	1 x 100	45' x 19'	400	C	72	G	CF 36,440		36,440
PINE			ATTIC													
HARDWOOD																
TILE			ADDNS. & PCHS.													
WOOD FRAMING																
STEEL FRAMING			SUBTOTAL													
REIN. CONCRETE			GRADE FACT. %													
<b>INTERIOR FINISH</b>			<b>OTHER FEATURES</b>													
B 1 2 3																
PLST./DRY WALL			DESIGN FACT. %													
FIBERBOARD																
UNFINISHED																
<b>NUMBER OF ROOMS</b>			SUBTOTAL													
1ST 2ND 3RD			COUNTY FACTOR													
BEDROOMS FAMILY RM.			REPL. VALUE													
						LISTED	DATE									
						SKETCHED										
						TOTAL TRUE CASH VALUE OF BUILDINGS										
						36,440										

GRADE DENOTES QUALITY OF CONSTRUCTION; A-EXCELLE.  
CDU FACTOR REFERS TO THE CONDITION DESIR

3-GOOD; C-AVERAGE; D-CHEAP; E-VERY CHEAP  
TY. AND USEFULNESS OF THE BUILDING

5-19-56-7 373A-16608

Pt S $\frac{1}{2}$  NE $\frac{1}{4}$  Sec 18  
561.3'S N Line S $\frac{1}{2}$  NE $\frac{1}{4}$   
160'x468.78' 1.72A

~~DIETZGEN CORPORATION (A DEL CORP)~~  
~~2425 N. SHEPPHARD AV.~~  
~~CHICAGO, ILL. 60614~~

Anderson, Lee R. #9024  
2366 Rose Place Street, St. Paul Minn. 55113

DATE

7/6/77

# VALUATION RECORD

ASSESSMENT YEAR	1978	19	19	19	19	19	19	19
REASON FOR CHANGE	REVALUATION							
TRUE CASH VALUE	LAND	13760						
	IMPROVEMENTS							
	TOTAL	13760						
ASSESSED VALUE	LAND	4590						
	IMPROVEMENTS							
	TOTAL	4590						

# LAND DATA AND COMPUTATIONS

TOPOGRAPHY	PUBLIC UTILITIES	LAND TYPE	ACTUAL FRONTAGE	EFFECTIVE FRONTAGE	EFFECTIVE DEPTH	DEPTH FACTOR	BASE RATE	ADJUSTED RATE	EXTENDED VALUE	INFLUENCE FACTOR	TRUE CASH VALUE
LEVEL	WATER	F FRONT LOT	.								
HIGH	SEWER	R REAR LOT	.								
LOW	GAS	1 PRIMARY IND/COMM SITE	.								
ROLLING	ELECTRICITY	2 SECONDARY IND/COMM SITE	.								
SWAMPY	ALL	3 UNDEVELOPED									
		4 OPEN TILLABLE									
		5 OPEN NON-TILLABLE									
STREET OR ROAD	NEIGHBORHOOD	6 WOOD/WASTELAND									
PAVED	IMPROVING	61 PUBLIC ROAD	1	1.72	300				13760		13760
UNPAVED	STATIC	7 HOME SITE									
PROPOSED	DECLINING	8									
SIDEWALK		9									
ALLEY	BLIGHTED	0									
INFLUENCE FACTOR											
1 CORNER INFLUENCE	6 SHAPE OR SIZE										
2 ALLEY INFLUENCE	7 MISIMPROVEMENT										
3 TOPOGRAPHY	8 RESTRICTIONS										
4 UNDER IMPROVED	9										
5 EXCESS FRONTAGE											
TOTAL ADJUSTED											
TOTAL TRUE CASH LAND VALUE											

1-1-80 Agreement per School Districts.  
Taxing Unit changed per Annexation #2145

PLANT SITE

PROPERTY CLASS  
3 30

- 1 AGRICULTURAL
  - 00 vacant land
  - 01 cash grain/gen farm
  - 02 livestock o/t 03 & 04
  - 03 dairy farms
  - 04 poultry farms
  - 05 fruit & nut farms
  - 06 vegetable farms
  - 07 tobacco farms
  - 08 nurseries
  - 09 greenhouses
  - 20 timber
  - 99 other agricultural use

# 2 MINERAL

- 3 INDUSTRIAL
  - 00 vacant L.
  - 10 food & drink
  - 20 foundries & heavy mfg
  - 30 medium mfg. & assem
  - 40 light mfg & assembly
  - 50 ind. warehouses
  - 60 ind. truck terminals
  - 70 small shops
  - 80 mines & quarries
  - 90 grain elevators
  - 99 other ind structures

# 4 COMMERCIAL

- 00 vacant land
- 01 04-19 family apts
- 02 20-39 family apts
- 03 40 or more families
- 10 motels/tourist cabins
- 11 hotels
- 12 nursing hms/hospitals
- 15 mobile home parks
- 16 Comm. camp grounds
- 19 other Comm. housing
- 20 small det. retl. (-10000)
- 21 supermarkets
- 22 disct./jr. dept. stores
- 24 full line dept. stores
- 25 neighborhood shop. cent
- 26 community shop. cent
- 27 regional shop. center
- 29 other retail struct
- 30 rest., cafe and/or bar
- 35 drive-in restaurant
- 39 other food svc. struct.
- 40 dry clean plant/laundr
- 41 funeral homes
- 42 med. clinics & offices
- 44 full service banks
- 45 savings and loans
- 47 office bldg - 1 & 2 stor
- 48 office o/t 47 - walk up
- 49 office o/t 47 - elevato
- 52 auto service station
- 53 car washes
- 54 auto sales & service
- 55 Comm. garage
- 56 parking lot or struct.
- 60 theaters
- 61 drive in theaters
- 62 golf range/min. cours
- 63 golf courses
- 64 bowling alleys
- 65 lodge halls/amuse. ph
- 80 Comm. warehouses
- 82 Comm. truck terminals
- 90 marine svc. facilities
- 99 other Comm. structure

# 5 RESIDENTIAL

- 0 vacant land
- 1 one-family dwelling
- 2 two-family dwelling
- 3 three-family dwelling
- 4 house trailer (trail)
- 5 condominium unit
- 0 platted lot
- 1 unplatted 0-99 99 ac:
- 2 unplatted 10-19 99 ac:
- 3 unplatted 20-29 99 ac:
- 4 unplatted 30-39 99 ac:
- 5 unplatted 40+
- 99 other res structures



5-19-56-7 373A-1660

Pt NE ex 4.35A ex .17A ex 14.06A  
Sec 18 5.91A

~~DIETZGEN CORPORATION (A DEL CORP)~~  
~~2424 N. SHEFFIELD AV.~~  
~~CHICAGO, ILL. 60614~~

Anderson, Lee R.  
2366 Rose Place Street, St Paul Minn. 55113

#9024

DATE

7/6/77

PROPERTY ADDRESS

2500 S. 17th St 46577

MEMORANDUM

1-1-80 Agreement per School Districts.  
Taxing Unit changed per Annexation #2145

PROPERTY CLASS  
330

- 1 AGRICULTURAL
  - 00 vacant land
  - 01 cash grain/gen. farm
  - 02 livestock o/t 03 & 0
  - 03 dairy farms
  - 04 poultry farms
  - 05 fruit & nut farms
  - 06 vegetable farms
  - 07 tobacco farms
  - 08 nurseries
  - 09 greenhouses
  - 20 timber
  - 99 other agricultural us
- 2 MINERAL
- 3 INDUSTRIAL
  - 00 vacant l.
  - 10 food & drink
  - 20 foundries & heavy m
  - 30 medium mfg. & assem
  - 40 light mfg & assembl
  - 50 ind. warehouses
  - 60 ind. truck terminals
  - 70 small shops
  - 80 mines & quarries
  - 90 grain elevators
  - 99 other ind. structures

VALUATION RECORD

ASSESSMENT YEAR	1978	1979	1980	1981	1982	1983	1984	1985
REASON FOR CHANGE	REVALUATION							
TRUE CASH VALUE	LAND IMPROVEMENTS TOTAL	36370 872700 919980	47280 872700 919980					
ASSESSED VALUE	LAND IMPROVEMENTS TOTAL	12120 290900 306660	15760 290900 306660					

LAND DATA AND COMPUTATIONS

TOPOGRAPHY	PUBLIC UTILITIES	LAND TYPE	ACTUAL FRONTAGE	EFFECTIVE FRONTAGE	EFFECTIVE DEPTH	DEPTH FACTOR	BASE RATE	ADJUSTED RATE	EXTENDED VALUE	INFLUENCE FACTOR	TRUE CASH VALUE
LEVEL	WATER	F FRONT LOT	.								
HIGH	SEWER	R REAR LOT	.								
LOW	GAS	1 PRIMARY IND/COMM SITE	.								
ROLLING	ELECTRICITY	2 SECONDARY IND/COMM SITE	.								
SWAMPY	ALL	3 UNDEVELOPED									
STREET OR ROAD	NEIGHBORHOOD	4 OPEN TILLABLE									
PAVED	IMPROVING	5 OPEN NON TILLABLE									
UNPAVED	STATIC	6 WOOD/WASTELAND									
PROPOSED	DECLINING	61 PUBLIC ROAD	1	2.50	8000		20000				20000
SIDEWALK		7 HOME SITE	2	3.41	8000		27200	0.41	40%		16370
ALLEY	BLIGHTED	8	1	5.91	8000		47280				47280
INFLUENCE FACTOR		9									
1 CORNER INFLUENCE	6 SHAPE OR SIZE	0									
2 ALLEY INFLUENCE	7 MISIMPROVEMENT										
3 TOPOGRAPHY	8 RESTRICTIONS										
4 UNDER IMPROVED	9 NEW										
5 EXCESS FRONTAGE											
											47280

- 4 COMMERCIAL
  - 00 vacant land
  - 01 04-19 family apts.
  - 02 20-39 family apts.
  - 03 40 or more families
  - 10 motels/tourist cablr
  - 11 hotels
  - 12 nursing hms/hospita
  - 15 mobile home parks
  - 16 Comm. camp ground
  - 19 other Comm. housing
  - 20 small det. retl. 1-100
  - 21 supermarkets
  - 22 disctn/jr. dept. stor
  - 24 full line dept. stores
  - 25 neighborhood shop. ce
  - 26 community shop. cen
  - 27 regional shop. center
  - 29 other retail struct.
  - 30 rest., cafe and/or ba
  - 35 drive in restaurant
  - 39 other food svc. struc
  - 40 dry clean plant/laun
  - 41 funeral home
  - 42 med. clinics & office
  - 44 full service banks
  - 45 savings and loans
  - 47 office bldg.-1 & 2 st
  - 48 office o/t 47-walk u
  - 49 office o/t 47-elevat
  - 52 auto service station
  - 53 car washes
  - 54 auto sales & service
  - 55 Comm garage
  - 56 parking lot or struct.
  - 60 theaters
  - 61 drive-in theaters
  - 62 golf range min. cour
  - 63 golf courses
  - 64 bowling alleys
  - 65 lodge halls/amuse p
  - 80 Comm. warehouses
  - 82 Comm. truck termina
  - 90 marine svc. facilities
  - 96 marinas (small boats)
  - 99 other Comm. structur

- 5 RESIDENTIAL
  - 0 vacant land
  - 1 one-family dwelling
  - 2 two-family dwelling
  - 3 three-family dwelling
  - 4 house trailer (real)
  - 5 condominium unit
  - 0 platted lot
  - 1 unplatted 00999 a
  - 2 unplatted 101999 a
  - 3 unplatted 203999 a
  - 4 unplatted 303999 a
  - 5 unplatted 40+
  - 99 other res. structures





TOPOGRAPHY		IMPROVEMENTS		STREET OR ROAD		DISTRICT	
LEVEL	<input checked="" type="checkbox"/>	CITY WATER	<input checked="" type="checkbox"/>	PAVED	<input checked="" type="checkbox"/>	IMPROVING	<input checked="" type="checkbox"/>
HIGH	<input type="checkbox"/>	SEWER	<input type="checkbox"/>	SEMI-IMPROVED	<input checked="" type="checkbox"/>	STATIC	<input type="checkbox"/>
LOW	<input type="checkbox"/>	GAS	<input checked="" type="checkbox"/>	UNIMPROVED	<input type="checkbox"/>	DECLINING	<input type="checkbox"/>
ROLLING	<input type="checkbox"/>	ELECTRICITY	<input checked="" type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
SWAMP	<input type="checkbox"/>	ALL UTILITIES	<input type="checkbox"/>	SIDEWALK	<input type="checkbox"/>	BLIGHTED AREA	<input type="checkbox"/>

# BUILDING RECORD

MR. GAGE

CONSTRUCTION SPECIFICATIONS										COMMERCIAL COMPUTATIONS											
OCCUPANCY					PLUMBING					WL. HT.	BLDG. A					BLDG. B					WL. HT.
2 DWELLING OTHER					PLUMBING																
BASEMENT					STANDARD																
2 3 4 5					BATHROOM																
CRAWL PART HALF FULL					TOILET ROOM																
					SINK/LAVATORY																
HEATING					WATER CLOSET																
2 3					WATER HEATER																
BASE AIRCON					URINAL																
					NO PLUMBING																
					ATTIC																
					1 2 3 4																
					NONE UNFIN. HALF FULL																
WALLS					OTHER FEATURES																
STUCCO					PART MASONRY WALLS																
TE BLOCK					FIREPLACE																
STONE					MODERN KITCHEN																
					FINISHED BASEMENT																
GLASS FRONT																					
ROOF																					
E-ASPHALT/ASBESTOS																					
FILE					DWELLING COMPUTATIONS																
W-STD/STL FRAMING					UNIT AMOUNT																
					S.F.																
FLOORS					BASEMENT																
B 1 2 3					HEATING																
					PLUMBING																
					ATTIC																
DOD					ADDNS. & PCHS.																
					SUBTOTAL																
FRAMING					GRADE FACT. %																
CONCRETE																					
INTERIOR FINISH					OTHER FEATURES																
B 1 2 3					DESIGN FACT. %																
DRY WALL																					
DARD																					
SHED																					
NUMBER OF ROOMS					SUBTOTAL																
3RD					COUNTY FACTOR																
FAMILY RM					REPL. VALUE																

BUILDING TYPE	NO.	CONSTRUCTION	SIZE	UNIT VALUE	GRADE	AGE	CDU	REPL. VALUE	DEPR.	TRUE CASH VALUE
DWELLING										
GARAGE										
	A	1 <sup>st</sup> C.B.			C+	1920	G	324,950	15%	276,210
	B	H.I. 1 <sup>st</sup> C.B.			B	1968	G	103,190	3%	100,090
OFFICE	C	1 <sup>st</sup> B.R.	3895	850	C	1960	G	33,110	15%	28,440
DOCK	D	1 <sup>st</sup> B.R.	3100	420		1960	G	13,020	15%	11,070
	E	1 <sup>st</sup> B.R.	2337	400		1960	G	9,350	15%	7,950
CONC. WELL PIT.			224	500		1960	G	1,120	20%	900
PVG.			31200	250				7800	50%	3900
P.R. JUDGE			420	140				5880	40%	3528
CARD 16609	F		5183	400				3673		3673
	G		1920	400				CF 8070		8070
LISTED		DATE 3-20-69								
SKETCHED										
TOTAL TRUE CASH VALUE OF BUILDINGS										438,790

(A)  $1120 \times 4.50^2 = 44800$   
 $71344 \div 26380 = 271110$   
 ADDN  
 $1920 \div 4.50 = 400$   
 $3640$   
 $324950$

(B)  $15876 \div 15.50 = 103190$

GRADE DENOTES QUALITY OF CONSTRUCTION; A-EXCELLENT; B-VERY GOOD; C-AVERAGE; D-CHEAP; E-VERY CHEAP  
 CDU FACTOR REFERS TO THE CONDITION, DESIRABILITY AND USEFULNESS OF THE BUILDING

10' DEEP  
CONC. WALL  
PIT

EUGENE DIEZGEN CO  
2500 So. 17th St

See chart  
1660

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11-26-75

E C C 16607

didn't have card.

Sions. # 8175

7-15-75

From Central Warehouse  
to Dietzgen Corp.

ADDRESS OF PROPERTY

# CONCORD

**PROPERTY RECORD**

TAXING DISTRICT

# CONCORD

SECTION  
OR PLAT: ROUTING  
NUMBER

**CLASS OF  
PROPERTY**

CARD NUMBER OF

5-6-1-57-1755  
5-19-56-7 373A-16610  
SW Cor NE¼ (Oakland Pk. Lots 18-  
24 Vacated) Sec 18 4.59A

~~DIETZGEN, EUGENE CO., A DEL CORP~~  
~~2435 N. SHEFFIELD AVE.~~  
~~CHICAGO 14, ILLINOIS~~

60600

2500 surf st. Elk

## LAND VALUE COMPUTATIONS AND SUMMARY

FRONTAGE	DEPTH	UNIT VALUE	DEPTH FACTOR	ACTUAL VALUE	TRUE CASH VALUE	ASSESSED VALUE
IT DEPRECIATION						
OWNER INFL.						
CLASSIFICATION	NO. OF ACRES		RATE			
LIABLE LAND	(6)	47 1/2	1500		6180	
LIABLE LAND	(9)	- 1 1/2				
ATURE		12 1/2	5000		20600.	6,870.
OODLAND						
AStELAND						
Rd		47	- 00			
MESITE						
TOTAL ACREAGE		47 1/2				
TOTAL VALUE LAND					6180	2060
TOTAL VALUE BUILDINGS						
TOTAL VALUE LAND AND BUILDINGS					6180	2060

## BUILDING PERMIT RECORD

DATE	NUMBER	AMOUNT	PURPOSE

### RECORD OF OWNERSHIP

Anderson, Lee R.  
2366 Rose Place, St. Paul, Minnesota  
55113

DATE \_\_\_\_\_

## STAMPS

## ASSESSMENT RECORD

	LAND	6,870
	BLDGS.	
	TOTAL	6,870
1976-77	LAND	2060
	BLDGS.	
	TOTAL	2060
1977-78	LAND	3,090
	BLDGS.	
	TOTAL	3,090
1978-79	LAND	
	BLDGS.	
	TOTAL	
1979-80	LAND	
	BLDGS.	
	TOTAL	
1980-81	LAND	
	BLDGS.	
	TOTAL	
1981-82	LAND	
	BLDGS.	
	TOTAL	
1982-83	LAND	
	BLDGS.	
	TOTAL	
1983-84	LAND	
	BLDGS.	
	TOTAL	

## MEMORANDA

MEMORANDA

CBL 76 entry appealed to State 7-29-77

## PROPERTY FACTORS

TOPOGRAPHY		IMPROVEMENTS		STREET OR ROAD		DISTRICT		19	LAND
LEVEL	<input checked="" type="checkbox"/>	CITY WATER		PAVED		IMPROVING			BLDGs.
HIGH		SEWER		SEMI-IMPROVED	<input checked="" type="checkbox"/>	STATIC	<input checked="" type="checkbox"/>	TOTAL	
LOW		GAS		UNIMPROVED		DECLINING		LAND	
ROLL		ELECTRICITY	<input checked="" type="checkbox"/>						
SWAMPY		ALL UTILITIES		SIDEWALK		BLIGHTED AREA		TOTAL	

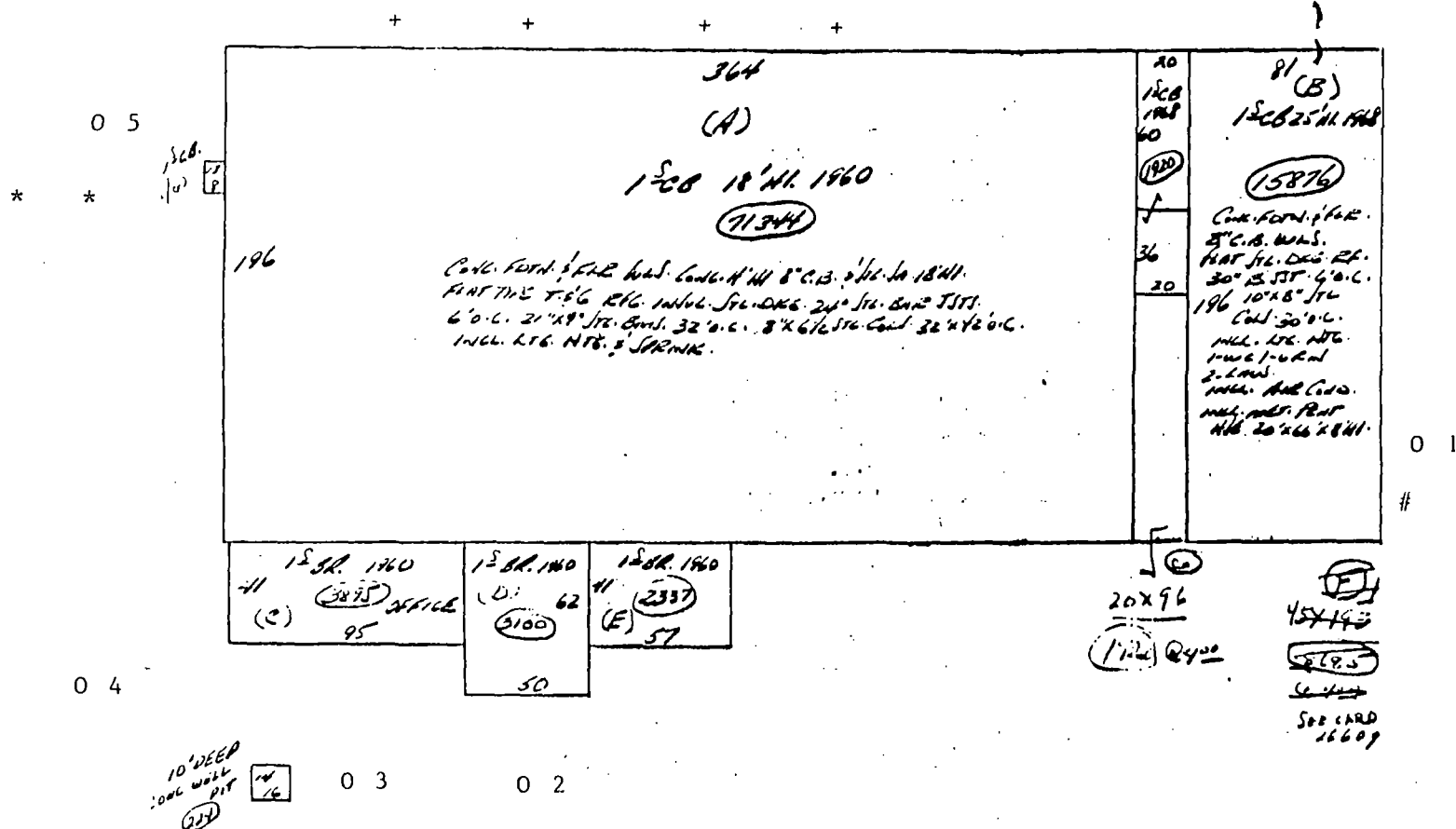
6-18B

100/

1711

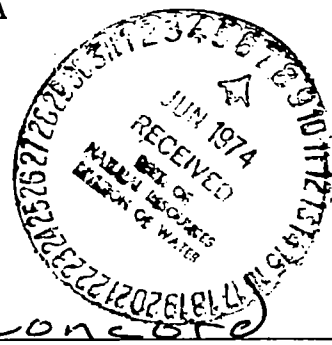
186

# RAILROAD AREA



EUGENE DIEZGEN CO. 2500 So. 17th St.

- + = Hand Auger/Soil Borings
- O = Proposed Monitor Well
- \* = Cement Slabs
- # = USTs Location



## WATER WELL RECORD

### WELL LOCATION

(Fill in completely - Refer to instruction sheet)

County in which well was drilled Elkhart Civil Township Concord

Driving directions to the well location: Include County Road Names, Numbers, Subdivision Name, lot number, distinctive landmarks, etc.

1320 Marble Ave Elkhart

### NAME OF WELL OWNER and/or BUILDING CONTRACTOR

Well Owner Hobart D Blough Sr Address 1320 Marble Elk

Building Contractor \_\_\_\_\_ Address \_\_\_\_\_

Name of Well Drilling Contractor: ELKHART CO. FARM BUREAU CO-OP ASSN.

Address 212 W. Harrison Goshen

Name of Drilling Equipment Operator: Bill Hoover

### WELL INFORMATION

Depth of well: 46' Date well was completed: May 10, 1974

Diameter of casing or drive pipe: 2 1/2" Total Length: 18' LEN

Diameter of liner (if used): \_\_\_\_\_ Total Length: \_\_\_\_\_

Diameter of Screen: 2" Length: 6' Slot Size: 10

Type of Well: Drilled ☒ Gravel Pack ☐ Driven ☐ Other \_\_\_\_\_

Use of Well: For Home ☒ For Industry ☐ For Public Supply ☐ Stock ☐

Method of Drilling: Cable Tools ☐ Rotary ☐ Rev. Rotary ☐ Jet ☒ Bucket Rig ☐

Static water level in completed well (Distance from ground to water level) \_\_\_\_\_ feet

Bailer Test: Hours Tested \_\_\_\_\_ Rate \_\_\_\_\_ g.p.m. Drawdown \_\_\_\_\_ ft. (Drawdown is the difference between static level and water level at end of test)

Pumping Test: Hours Tested \_\_\_\_\_ Rate \_\_\_\_\_ g.p.m. Drawdown \_\_\_\_\_ ft.

Signature Bill Hoover

Date 5/13/74





DIVISION OF WATER  
DEPARTMENT OF NATURAL RESOURCES, STATE OF INDIANA  
STATE OFFICE BUILDING  
INDIANAPOLIS, INDIANA 46204  
Telephone 633-5267 Area Code 317



## WATER WELL RECORD

### WELL LOCATION

(Fill in completely - Refer to instruction sheet)

County in which well was drilled Elkhart Civil Township Concord

Driving directions to the well location: Include County Road Names, Numbers, Subdivision Name, lot number, distinctive landmarks, etc.

1321 Fieldhouse off of 14th street

### NAME OF WELL OWNER and/or BUILDING CONTRACTOR

Well Owner James Barnett Address 1321 Fieldhouse

Building Contractor \_\_\_\_\_ Address \_\_\_\_\_

Name of Well Drilling Contractor: R. L. Mayfield

Address 10807 Deland Rd.

Name of Drilling Equipment Operator: R. L. Mayfield

### WELL INFORMATION

Depth of well: 33' Date well was completed: 8/27/74

Diameter of casing or drive pipe: 2" Total Length: 29'

Diameter of liner (if used): \_\_\_\_\_ Total Length: \_\_\_\_\_

Diameter of Screen: 1 1/4" Length: 4' Slot Size: 60 gauge

Type of Well: Drilled ☒ Gravel Pack ☐ Driven ☐ Other \_\_\_\_\_

Use of Well: For ~~Home~~ GARAGE ☒ For Industry ☐ For Public Supply ☐ Stock ☐

Method of Drilling: Cable Tools ☐ Rotary ☐ Rev. Rotary ☐ Jet ☒ Bucket Rig ☐

Static water level in completed well (Distance from ground to water level) \_\_\_\_\_ feet

Bailer Test: Hours Tested \_\_\_\_\_ Rate \_\_\_\_\_ g.p.m. \_\_\_\_\_ Drawdown \_\_\_\_\_ ft. (Drawdown is the difference between static level and water level at end of test)

Pumping Test: Hours Tested 1 Rate 10 g.p.m. \_\_\_\_\_ Drawdown \_\_\_\_\_ ft.

Signature Robert L. Mayfield

Date 8/27/74

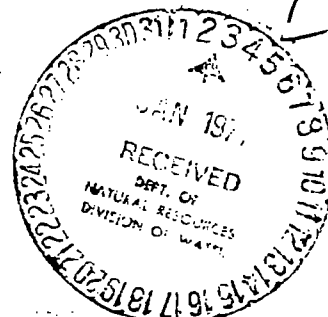
FOR WELL LOG SPACE USE REVERSE SIDE OF THIS SHEET

(Well driller does not fill out)

\_\_\_\_\_ Ft S of NL.      Aquifer elevation \_\_\_\_\_      Lot Number \_\_\_\_\_

[illegible]

DIVISION OF WATER  
DEPARTMENT OF NATURAL RESOURCES, STATE OF INDIANA  
STATE OFFICE BUILDING  
INDIANAPOLIS, INDIANA 46209  
MElrose 3-6757  
**WATER WELL RECORD**



INFORMATION ON WELL LOCATION

County in which well was drilled: Elkhart Civil Township: Concord

Congressional township: \_\_\_\_\_ Range: \_\_\_\_\_ Number of section: \_\_\_\_\_  
(Fill in as completely as possible)

Describe in your own words the well location with respect to nearby towns, roads, streets

or distinctive landmarks: About 1/2 block south of Hively Ave. on  
17th Street on west side of Road

Name of owner: Prince, Tash and Dill Co. Address: 2721-17th Street  
Elkhart, Indiana 46514

Name of Well Drilling Contractor: B. J. Moore & Son

Address: 1406 St. Indiana Ave. Elkhart, Indiana 46514

Name of Drilling Equipment Operator: Wayne L. Moore

INFORMATION ON THE WELL

Completed depth of well: 61 ft. Date well was completed: 1976

Diameter of outside casing or drive pipe: 4" Length: 51'

Diameter of inside casing or liner: \_\_\_\_\_ Length: \_\_\_\_\_

Diameter of Screen: 3 3/4" Length: 10' Slot size: #10

Type of Well: Drilled ☒ Gravel Pack ☐ Driven ☐ Other \_\_\_\_\_

Use of Well: For home ☐ For industry ☒ For public supply ☐ Stock ☐

Method of Drilling: Cable Tools ☒ Rotary ☐ Rev. Rotary ☐ Jet ☐ Driven ☐

Static water level in completed well (Distance from ground to water level) 15'-06" ft.

Bailer Test: Hours tested \_\_\_\_\_ Rate \_\_\_\_\_ g.p.m. Drawdown \_\_\_\_\_ ft. (Difference between  
static level and water

Pumping Test: Hours tested 4 Rate 50 g.p.m. Drawdown 0 ft. level at end of test)

Signature Wayne L. Moore

Date 12/28/76

FOR WELL LOG SPACE USE REVERSE SIDE OF THIS SHEET

Pierce 1001  $\approx$  N12

Topo Map: Elkhart

Well log classified By TC Date 12-76  
 Courthouse located By \_\_\_\_\_ Date \_\_\_\_\_  
 Field located By \_\_\_\_\_ Date \_\_\_\_\_  
 Acc. w/o verification By gmb Date 1-7-77

Ft W of EL.	Ground elevation	≈ 762
Ft N of SL.	Depth to bedrock	
Ft E of WL.	Bedrock elevation	
Ft S of NL.	Aquifer elevation	

[illegible]

Base Map

An accurate location of the well is equally as important as an accurate well log. Please include all information possible in the space provided for well location.

As specified in Chapter 6 of the Acts of 1959, a copy of this report must be submitted<sup>2</sup> within thirty days after the completion of a well to the Division of Water

DIVISION OF WATER RESOURCES  
INDIANA DEPARTMENT OF CONSERVATION  
609 STATE OFFICE BUILDING  
INDIANAPOLIS 9, INDIANA



WATER WELL RECORD

INFORMATION ON WELL LOCATION

County in which well was drilled: Elkhart Civil Township: \_\_\_\_\_

Congressional township: \_\_\_\_\_ Range: \_\_\_\_\_ Number of section: \_\_\_\_\_

(Fill in as completely as possible)

Describe in your own words the well location with respect to nearby towns, roads, streets

or distinctive landmarks: 1407 South 14th St.

Name of owner: Carl Bumgartner Address: 1407 S. 14th St. Goshen

Name of Well Drilling Contractor: Glen Hapner

Address: 907 Gallinger Rd. Goshen, Indiana

Name of Drilling Equipment Operator: Glen Hapner

INFORMATION ON THE WELL

Completed depth of well: 31 ft. Date well was completed: August 4

Diameter of outside casing or drive pipe: 2 in. Length: \_\_\_\_\_

Diameter of inside casing or liner: \_\_\_\_\_ Length: \_\_\_\_\_

Diameter of Screen: 2 in Length: \_\_\_\_\_ Slot size: 60 ga.

Type of Well: Drilled ☐ Gravel Pack ☐ Driven ☒ Other \_\_\_\_\_

Use of Well: For home ☐ For industry ☐ For public supply ☐ Stock ☐

Method of Drilling: Cable Tools ☐ Rotary ☐ Rev. Rotary ☐ Jet ☐ Driven ☒

Static water level in completed well (Distance from ground to water level) 21 ft.

Bailer Test: Hours tested \_\_\_\_\_ Rate \_\_\_\_\_ g.p.m. Drawdown \_\_\_\_\_ ft. (Difference between

Pumping Test: Hours tested \_\_\_\_\_ Rate \_\_\_\_\_ g.p.m. Drawdown \_\_\_\_\_ ft. static level and water level at end of test)

Signature Hapner and Son

Date 8/26/65



## WATER WELL LOG

FOR ADMINISTRATIVE USE ONLY  
(Well driller does not fill )

COUNTY: ELK TWP. 32N RGE. 5E  $\frac{1}{4}$   $\frac{1}{4}$  NF  $\frac{1}{4}$  SEC. 18

Topo Map: Elkhart

Well log classified By dm Date 8/25  
 Courthouse located By \_\_\_\_\_ Date \_\_\_\_\_  
 Field located By \_\_\_\_\_ Date \_\_\_\_\_  
 Acc. w/o verification By \_\_\_\_\_ Date \_\_\_\_\_

Ft W of EL. Ground elevation \_\_\_\_\_  
 Ft N of SL. Depth to bedrock \_\_\_\_\_  
 Ft E of WL. Bedrock elevation \_\_\_\_\_  
 Ft S of NL. Aquifer elevation \_\_\_\_\_

[illegible]

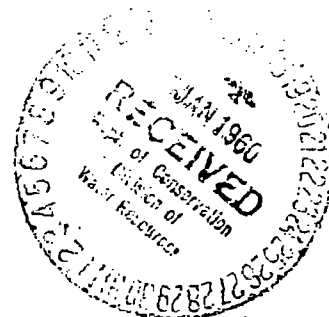
## INSTRUCTIONS

This Water Well Record form is designed to record the most essential data concerning a water well. We request that you be as accurate as possible in recording this information as it may be of great assistance in the planning and development of new water supplies.

An accurate location of the well is equally as important as an accurate well log. Please include all information possible in the space provided for well location.

As specified in Chapter 6 of the Acts of 1959, a copy of this report must be submitted within thirty days after the completion of a well to the Division of Water Resources, Indiana Department of Conservation.

DIVISION OF WATER RESOURCES  
INDIANA DEPARTMENT OF CONSERVATION  
311 WEST WASHINGTON STREET  
INDIANAPOLIS, INDIANA



WATER WELL RECORD

INFORMATION ON WELL LOCATION

County in which well was drilled: Elkhart Civil Township: Concord

Congressional township: 37 N Range: 5 E Number of section: \_\_\_\_\_  
(Fill in as completely as possible)

Describe in your own words the well location with respect to nearby towns, roads, streets or distinctive landmarks: 1/4 block East of 17th street and one block South of Lineinger Ave., Elkhart, Indiana

Name of owner: Eugene Dietzen Co. Inc. Address: 2500 S. 17th Street

Name of Well Drilling Contractor: B. J. Moore & Son

Address: 1606 W. Indiana Ave. Elkhart, Indiana

Name of Drilling Equipment Operator: Wayne L. Moore

INFORMATION ON THE WELL

Completed depth of well: 89 ft. Date well was completed: \_\_\_\_\_

Diameter of outside casing or drive pipe: 8" I.D. Length: 68'

Diameter of inside casing or liner: \_\_\_\_\_ Length: \_\_\_\_\_

Diameter of Screen: 6 3/4" O.D. Length: 20' Slot size: 30

Type of Well: Drilled ☒ Gravel Pack ☐ Driven ☐ Other \_\_\_\_\_

Use of Well: For home ☐ For industry ☒ For public supply ☐ Stock ☐

Method of Drilling: Cable Tools ☒ Rotary ☐ Rev. Rotary ☐ Jet ☐ Driven ☐

Static water level in completed well (Distance from ground to water level) 14 ft.

Bailer Test: Hours tested \_\_\_\_\_ Rate \_\_\_\_\_ g.p.m. Drawdown \_\_\_\_\_ ft. (Difference between static level and water level at end of test)

Pumping Test: Hours tested 8 Rate 75 g.p.m. Drawdown 1 ft. level at end of test)

Signature Wayne L. Moore

Date 11/30/59

FOR WELL LOG SPACE USE REVERSE SIDE OF THIS SHEET

# WATER WELL LOG

FOR ADMINISTRATIVE USE ONLY  
(Well Driller does not fill out)

2450 W OF EL  
1950 S OF NL

COUNTY: Elkhart TWP. 37N RGE. 5E NW  $\frac{1}{4}$  SW  $\frac{1}{4}$  NE  $\frac{1}{4}$  SEC. 18

Topo. Map: Elkhart Loc. accepted w/o verification Yes ☒ No ☐

El. of grnd. surface at well: 755+ Courthouse Loc. By          Date           
Depth to bedrock:          Field Located By PU Date 8-72  
Well Log processed by:          Placed in Master Well Log File Date         

FORMATIONS (Color, type of material, hardness, etc.)	From	To
Brown sand & gravel	0	10'
gray sand & coarse gravel	10'	26'
Blue clay & coarse gravel	26'	31'
Mixture sand & fine & coarse gray sand	31'	42'
Coarse gray sand & gravel	42'	47'
Coarse gray sand & gravel mixed with brown clay balls & silt	47'	58'
Consolidated sand, gravel and clay "Hardpan"	58'	68'
Coarse light brown gravel & stones, with silt	68'	89'
REMARKS: Well equipped with 150 G.P.M. Turbine pump for heat pump heating, with 12" disposal well drilled nearby		

## INSTRUCTIONS

This Water Well Record form is designed to record the most essential data concerning a water well. We request that you be as accurate as possible in recording this information as it may be of great assistance in the planning and development of new water supplies.

An accurate location of the well is equally as important as an accurate well log. Please include all information possible in the space provided for well location.

As specified in Chapter 6 of the Acts of 1959, a copy of this report must be submitted within thirty days after the completion of a well to the Division of Water Resources, Indiana Department of Conservation, 311 West Washington Street, Indianapolis, Indiana.

Bare Mar

Dietygan Co



# PLEWS & SHADLEY

ATTORNEYS AT LAW

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† ADMITTED U.S. PATENT AND TRADEMARK OFFICE

January 5, 1993

Mr. Michael A. Metz  
Barnes & Thornburg  
305 Ameritrust National Bank Building  
301 South Main Street  
Elkhart, Indiana 46516

Re: Request for Production of Documents Directed to Anco Products, Inc.

Dear Mr. Metz:

This will confirm our telephone conversation of January 5, 1993. At that time I advised you that we represent Anco Products, Inc. in responding to your request for production of documents to a non-party.

I told you that Anco is willing to cooperate with you by providing documents and information relevant to your case. However, I also stated that the breadth of your document production requests is so great that, as served, the requests are unduly burdensome. In an effort to cooperate you advised me that we can comply with your requests by providing information related to two general categories:

1. Personal knowledge of individuals in the corporation about procedures utilizing the chemicals TCA and TCE
2. Personal knowledge of individuals in the corporation regarding the release of hazardous materials by the corporation.

Since our conversation I have spoken with Howard Tomlinson, President of Anco. As to category 2, Mr. Tomlinson advises that Anco has never had a release of hazardous

Mr. Michael A. Metz  
January 5, 1993  
Page 2

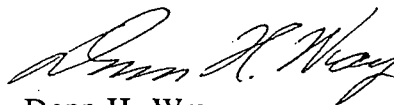
materials. As to category 1, Mr. Tomlinson is in the process of pursuing anecdotal oral leads that a small amount of TCE may have been used by Anco within the last 10 years. We will advise in greater detail after his investigation is complete. He does not believe, on the basis of the anecdotal oral reports, that a large amount was used or ever on Anco's premises.

I told you that, in response to your request for production, Anco is willing to produce its MSDS file (including MSDSs for substances no longer in use) and information pertaining to test borings done on its property over a period of time. As I advised you, the first of those test borings showed that that groundwater under Anco's property was clean, but later borings have shown that TCE has migrated onto Anco's property through the groundwater. I also advised you that Anco has a pending permit application for an air permit with IDEM. Although you indicated that probably that is not germane to your inquiry, we will provide you with the data necessary to help you locate that file at IDEM if you desire to do so. I also advised that Anco closed two stainless steel USTs left behind by the prior owner, Deitzgen Company. Those tanks contained toluene and acetone in small quantities. The solvents remaining in the tanks were cleaned and properly disposed of. Test borings consistent with IDEM's UST closure protocol were taken and showed that the surrounding soil was clean. IDEM issued a closure approval statement on that project and we will provide you with all of those documents or information necessary for you to locate them in IDEM's files.

This will also confirm that you will grant an extension to comply with your request to January 26, 1993. You also agreed that, by extending time pursuant to this agreement, we do not waive any right we may have to object to your request for production pursuant to the rules.

I anticipate being able to provide you with the additional information referred to above in the near future. Should you have any questions or comments do not hesitate to contact me.

Very truly yours,



Donn H. Wray

DHW/rlg  
cc: Howard Tomlinson



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February 15, 1993

Mr. Howard Tomlinson  
Anco Products, Inc.  
2500 South 17th Street  
Eklhart, Indiana 46517

Dear Howard:

Completing our project on the document production, I enclose for your signature an "Affidavit of Diligent Search in Response to Request for Production of Documents." Mr. Metz has approved the form of this document as being responsive to his desires.

If you would be so kind as to sign this and return it in the self-addressed, stamped envelope provided for your convenience, that will complete our document production. For your information, Mr. Metz has told me that Barnes & Thornburg is having to get out of this case due to a conflict that came up involving one of the non-parties whose documents were subpoenaed in this production request. Mr. Metz tells me that if we get this stuff back to him this week he can still take care of it, otherwise we will have to handle it through successor counsel. I figure it is easier for us to wrap this up with the guy we started with.

Very truly yours,



Donn H. Wray

DHW/rlg  
Enclosure

**AFFIDAVIT OF DILIGENT SEARCH IN RESPONSE  
TO REQUEST FOR PRODUCTION OF DOCUMENTS**

Howard Tomlinson, having been duly sworn upon his oath, deposes and says:

1. I am the president of Anco Products, Inc. ("Anco"), and make this affidavit of my own personal knowledge on behalf of Anco.

2. On or about December 28, 1992 Anco was served with a request for production of documents by counsel for Walerko Tool & Engineering Corporation ("Walerko").

3. Subsequently, in consultation with Anco's counsel, counsel for Walerko amended his request for production of documents to include a request for documents and information pertaining to two general categories, specifically:

- A. Personal knowledge of individuals employed by Anco about procedures utilizing the chemicals TCA and TCE by Anco; and
- B. Personal knowledge of individuals working for Anco regarding the release of hazardous materials by Anco.

Counsel for Walerko further requested any documents pertaining to either of the above general categories.

4. I personally have made diligent search of Anco's records and have also supervised other Anco employees in that diligent search. By means of Anco's counsel's letter of January 26, 1993 (which enclosures) to Michael A. Metz, counsel to Walerko, Anco has previously produced the following documents:

- A. Photocopy of Anco's material safety data sheet file including Anco's general product information.
- B. Rosters showing "documents of public record" filed by Anco with various environmental agencies.
- C. Document dated 1/17/85 with photocopy of drum photograph reflecting that one 55-gallon drum of

trichloroethane was received and returned for credit at that time.

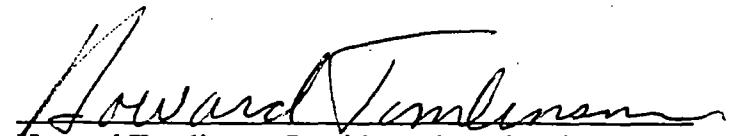
- D. Series of invoices and warehouse receipts reflecting purchase of trichloroethane in various amounts at various times and dates ranging from 8/1/79 to 5/23/85.
- E. Portion of environmental audit of Anco site conducted by C.H.E.S. Consultants, Inc., in May and June, 1989 with accompanying analytic showing TCE as non-detect on Anco's premises. Additionally, these materials reflect soil samples with 17,000 and 1,900 parts per million total petroleum hydrocarbons at one location. I am advised these were soils impacted by hydraulic fluid that had leaked from the Himco trash compactor and that the impacted soils were removed by Himco later in 1989.

In addition to the above-enumerated documents produced with Anco's counsel's letter of January 26, 1993, I have provided to Walerko's counsel, on behalf of Anco, the Affidavit of Mary Wirt.

5. The above-enumerated documents are all the documents responsive to Walerko's counsel's request, as amended, that I was able to locate as a result of my diligent search.

**FURTHER AFFIANT SAYETH NOT.**

I hereby swear or affirm under the penalties for perjury that the foregoing representations are true and correct to the best of my knowledge and belief.

  
Howard Tomlinson, President, Anco Products, Inc.

Date: Feb 19 1993

## United States District Court

NORTHERN

DISTRICT OF

INDIANA

UNITED STATES OF AMERICA

V

## SUBPOENA IN A CIVIL CASE

WALERKO TOOL AND ENGINEERING CORPORATION

CASE NUMBER: S91-411 (RLM)

TO: Anco  
- 2500 17th St.  
Elkhart, IN 46517

☐ YOU ARE COMMANDED to appear in the United States District Court at the place, date, and time specified below to testify in the above case.

PLACE OF TESTIMONY

COURTROOM

DATE AND TIME

☐ YOU ARE COMMANDED to appear at the place, date, and time specified below to testify at the taking of a deposition in the above case.

PLACE OF DEPOSITION

DATE AND TIME

☒ YOU ARE COMMANDED to produce and permit inspection and copying of the following documents or objects at the place, date, and time specified below (list documents or objects):

See Exhibit "A"

PLACE Barnes & Thornburg  
301 South Main Street, Suite 305  
Elkhart, IN 46516

DATE AND TIME

Monday, January 11, 1993

☐ YOU ARE COMMANDED to permit inspection of the following premises at the date and time specified below.

PREMISES

DATE AND TIME

Any organization not a party to this suit that is subpoenaed for the taking of a deposition shall designate one or more officers, directors, or managing agents, or other persons who consent to testify on its behalf, and may set forth, for each person designated, the matters on which the person will testify. Federal Rules of Civil Procedure, 30(b) (6).

ISSUING OFFICER SIGNATURE AND TITLE (INDICATE IF ATTORNEY FOR PLAINTIFF OR DEFENDANT)

DATE

ISSUING OFFICER'S NAME, ADDRESS AND PHONE NUMBER

UNITED STATES DISTRICT COURT  
NORTHERN DISTRICT OF INDIANA  
SOUTH BEND DIVISION

UNITED STATES OF AMERICA, )

Plaintiff, )

vs. )

WALERKO TOOL AND )  
ENGINEERING CORPORATION, )

Defendant. )

CIVIL CASE NO. S91-411 (RLM)

DEFENDANT WALERKO TOOL & ENGINEERING CORPORATION'S  
REQUEST FOR PRODUCTION OF DOCUMENTS FROM NON-PARTIES

Defendant Walerko Tool & Engineering Corporation ("Walerko"), pursuant to Rules 5(b), 34(c), and 45 of the Federal Rules of Civil Procedure request the non-party referred to on the Subpoena to which this is an exhibit to produce the documents and tangible items identified below. This production is to be made at the offices of Barnes & Thornburg, 301 South Main Street, Suite 305, Elkhart, Indiana 46514 and is to occur no later than Monday, January 11, 1993.

DEFINITIONS AND INSTRUCTIONS

1. The term "document" means any written, recorded, graphic or other matter whether produced, reproduced, or stored on paper, cards, tapes, disks, belts, charts, film, computer storage devices, or any other medium including, but not limited to, matter in the form of books, manuals, resolutions, minutes, reports, studies, statements, inter-office communications, notebooks, applications, agreements, appointment calendars, working papers, graphs, contracts, memoranda, notes, records, correspondence, diaries, bookkeeping, regulations, and any published

EXHIBIT "A"

material, and also includes, but is not limited to, originals, copies with or without notes or changes thereon, and drafts.

2. The documents requested are those in the possession, custody, or control of, or obtainable by the non-party or by its attorneys.

3. In the event that any document is not produced because of a claim of privilege or other reason, state the following with respect to each document:

- a. the date of the document;
- b. the author of the document;
- c. the addresses and all recipients of the document;
- d. the type of document (for example, but not limited to, letter, statement, or memorandum) including the number of pages, attachments, exhibits, and the appendices;
- e. a general description of the subject matter of the document;  
and
- f. the nature of the privilege or other reason why the document has not been produced.

### REQUESTS

REQUEST NO. 1: Produce all documents relating or referring to any laboratory analysis ever performed by or on behalf of you on any material used by your company or any waste material ever disposed of by or on behalf of your company.

ANSWER:



REQUEST NO. 2: Produce all documents identifying all raw materials, intermediate materials, and finished products ever used or created by your company at its present facility in Elkhart, Indiana, including all chemicals used.

ANSWER:

REQUEST NO. 3: Produce all documents describing, relating to or referring to all pollution control equipment ever operated by your company at its present facility in Elkhart County, Indiana.

ANSWER:

REQUEST NO. 4: Produce all documents describing, relating to, or referring to all manufacturing processes ever performed at your company at its present facility in Elkhart County, Indiana.

ANSWER:

REQUEST NO. 5: Produce all documents relating to or referring to any citations, claimed violations, violations or fines concerning any federal, state, or local laws, regulations, or ordinances by your company at its present facility in Elkhart County, Indiana.

ANSWER:

REQUEST NO. 6: Produce all permits ever issued to your company for releasing or disposing of any materials, substances, or emissions from your company at its present facility in Elkhart County, Indiana, into the air, water, soil, or sewer system including any hazardous waste permits pursuant to the Resource Conservation and Recovery Act.

ANSWER:

REQUEST NO. 7: Produce any and all documents describing all products ever manufactured by your company at its present facility in Elkhart County, Indiana.

ANSWER:

REQUEST NO. 8: Produce all documents describing the ingredients and components contained in all products ever manufactured by your company at its present facility in Elkhart County, Indiana, including material safety data sheets for such products.

ANSWER:

REQUEST NO. 9: Produce all documents relating to or referring to disposal of any hazardous waste by or on behalf of your company at its present facility in Elkhart County, Indiana, including all bills of lading, manifests, and annual hazardous waste disposal forms filed with any federal, state, or local agency.

ANSWER:

REQUEST NO. 10: Produce all documents relating to or referring to the Federal Toxic Substances Control Act, including any 8-E submissions ever made by your company at its present facility in Elkhart County, Indiana.

ANSWER:

REQUEST NO. 11: Please produce any and all documents, including, without limitation, accounting records, cancelled checks, purchase orders, invoices and contracts, relating to or referring to disposal of any waste by or on behalf of your company at its present facility in Elkhart County, Indiana, at any time, whether by your company's employees or by independent contractors.

ANSWER:

REQUEST NO. 12: Produce all documents relating to or referring to operating instructions dealing with any portion of the chemical processes, procedures, and operations ever performed at your company on its present facility in Elkhart County, Indiana, including any documents dealing with the creation, handling, and disposal of residues, filters, filter cakes, solid waste, liquid waste, and emissions.

ANSWER:

REQUEST NO. 13: Produce all documents relating to or referring to any filings, submissions, disclosures, or publications ever made by your company at its present facility in Elkhart County, Indiana, pursuant to any federal or state "right to know" laws.

ANSWER:

REQUEST NO. 14: Produce any and all documents relating to or referring to any products ever made or used by your company at its present facility in Elkhart County, Indiana, which are subject to regulation under the Federal Insecticide, Fungicide, and Rodenticide Act.

ANSWER:

REQUEST NO. 15: Produce all documents relating to or referring to any violations or claim violations by your company of the Occupational Safety and Health Act due to an employee's injury from exposure or claimed injury from exposure to chemicals, including gases, liquids, and solids, in the work place at your company at its present facility in Elkhart County, Indiana.

ANSWER:

REQUEST NO. 16: Produce all documents relating to or referring to any wastes ever disposed of by or on behalf of your company at its present facility in Elkhart County, Indiana.

ANSWER:

REQUEST NO. 17: Produce all documents relating to or referring to your company's record retention policy or policies concerning the present facility in Elkhart County, Indiana.

ANSWER:

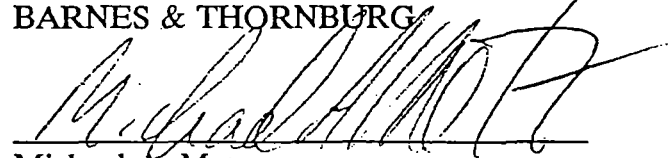
REQUEST NO. 18: Produce all documents which identify the names and last known addresses of all present and former employees of your company while at its present facility in Elkhart County, Indiana.

ANSWER:

REQUEST NO. 19: Produce all documents relating to or referring to any inquiry, investigation, visit, or report performed by the United States Environmental Protection Agency or the State of Indiana concerning your present facility in Elkhart County, Indiana.

ANSWER:

Requests for Production Submitted by:  
BARNES & THORNBURG



---

Michael A. Metz  
Attorney No. 13722-20  
BARNES & THORNBURG  
305 Ameritrust National Bank Bldg.  
301 South Main Street  
Elkhart, Indiana 46516  
Telephone: (219) 293-0681

Attorneys for Defendant  
Walerko Tool & Engineering





# PLEWS & SHADLEY

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February 12, 1993

Mr. Howard Tomlinson  
Anco Products, Inc.  
2500 South 17th Street  
Eklhart, Indiana 46517

Dear Howard:

Enclosed is the original of the non-[REDACTED] affidavit. I received your fax late Friday afternoon. In order to move this matter forward, I figured I would go ahead and send this up notwithstanding the fact I also have to get with Metz to determine the form of your affidavit regarding the document production. I anticipate sending that up to you within the next day or two.

Very truly yours,



Donn H. Wray

DHW/rlg  
Enclosure

# AFFIDAVIT

non- [REDACTED], having been duly sworn upon her oath, deposes and says:

1. My name is non- [REDACTED] and I make this affidavit of my own personal knowledge acquired throughout the course of my employment with Anco Products, Inc. ("Anco").

2. I have been employed at Anco Products since 1973. Anco moved to its present facility, located at 2500 South 17th Street, Elkhart, Indiana, to the best of my recollection, in early 1978.

3. I have been employed as a machine operator/duct assembler throughout my duration of employment with Anco.

4. Commencing with Anco's location at its present facility in 1978, I worked on 7-foot-long duct-making machines. These machines include 7-foot-long mandrils, which were utilized for the fabrication of fiberglass ducts. This process involved building layers of material with glue between the layers to create a strong fiberglass duct.

5. In the course of making ducts, some glue would spread to unwanted areas. It was necessary to clean that unwanted glue. To clean that glue, we utilized the solvent TCE.

6. We had four 7-foot mandril machines in service at the same time.

7. During the time period we utilized the 7-foot mandril machines, which ended some time in late 1979, each person working on each of the four machines would get about a gallon or a little more TCE in a work bucket by pumping it from a 55-gallon drum equipped with a pump. We would use that gallon of TCE for wiping down the machine and we would also put our glue gun in the bucket to clean it.

8. All of the TCE used for removing unwanted glue would evaporate. Similarly, the TCE used on the glue gun would evaporate. We kept sheets of cardboard underneath the mandril machines to catch drips of glue and TCE. The TCE and the solvents in the glue that fell on the cardboard would all evaporate, and at the end of the week we would throw away dry cardboard.

9. It is my best estimate that, throughout the time period in question, each 7-foot mandril machine utilized about a gallon of TCE during each shift. We were working two shifts a day at that time, so therefore about eight gallons of TCE a day were being used in the above-described fashion. All of that TCE evaporated.

10. In late 1979, the 7-foot mandrils were discontinued. We went to a 25-foot "hot melt" system. These mandrils also required cleaning with TCE, which was accomplished in a similar fashion. We also had four 25-foot hot melt mandril machines, and we were working two shifts. However, the use of the 25-foot machines was not as consistent and heavy during the 1979-1984 time period as was the earlier use of the 7-foot mandril machines, so therefore there was not as much necessity to wipe off glue and therefore there was not as much TCE used. Nevertheless, when the 25-foot machines were in use, they consumed about one gallon of TCE per machine per shift, all of which evaporated in a manner identical to that described above pertaining to the 7-foot mandril machines.

11. Throughout all of my years of employment with Anco Products, I never observed any TCE pooled on the floor or flowing anywhere. All of the TCE utilized evaporated in the course of its usage.

12. TCE use was discontinued completely in the early to mid-80s, and since that time we have used alternative solvents. These alternative solvents are such things as citrus-based cleaners and Windex.

FURTHER AFFIANT SAYETH NOT.

I hereby swear or affirm under the penalties for perjury that the foregoing representations are true and correct to the best of my knowledge and belief.

non-responsive

Dated: 2-16-93

January 22, 1993

Mr Donn H. Wray  
Plews & Shadley  
1346 North Delaware Street  
Indianapolis, IN 46202-2415

Dear Mr. Wray,

This morning, January 22, 1993, we interviewed one of our long time employees, [non-responsive]. The purpose of this interview was to determine how the trichloroethylene which was purchased during the period prox. 1978 through 1985 was used and/or disposed of. The present management team including the foreman in the plant joined the company in the period between June and October 1981 so our knowledge of events prior to that time is limited and we must depend on the recollections of the few people now in our employ who were with the company at that time.

According to our interview with [non-responsive] there were three mandrell type machines on which a liner or core material, wire and insulation, were applied and sprayed with an adhesive. The trichloroethylene was used to clean the glue off the mandrell, wire cutter and tools. She relates that the employees wore gloves and using a piece of insulation would dip it in the solvent and wipe or wash off those items indicated above. Since the solvent was highly volatile it evaporated off of the machines and the insulation which was disposed of in the normal manner. She was very clear in stating that the solvent was allowed to evaporate and that to the best of her knowledge none was ever disposed of in any other way.

It appears this process began operating at greatly reduced levels sometime in 1978 declining further through 1979 and 1980 and ceasing altogether sometime before our arrival in 1981 at which time it was replaced by the 25' product produced on the core machines. From that time forward the limited amount of solvent purchased were used to wipe down and clean the hot melt core machine and mandrells. As indicated it appears our last purchase of the solvent was made sometime in 1985.

There is one more employee that we can interview, [non-], but she is on a short vacation and will not be returning until next week sometime.

Sincerely,  
Anco Products, Inc.



Howard J. Tomlinson  
President



# API ANCO PRODUCTS, INC.

February 8, 1993

Mr. Harry Ackerson  
Indiana Department of Environmental Management  
Site Investigation Section  
106 South Meridian Street  
Indianapolis, IN 46206

Ref: **Information Sharing**  
**CERCLIS SITES**  
**Gemeinhardt and Bock Industries**  
**Elkhart County**  
**Elkhart, IN**

Dear Mr. Ackerson,

As part of a recent review of our records we find that information provided to you previously on this subject was incorrect. I refer specifically to a letter dated July 21, 1991 and addressed to you from Mr. John C. Wallace, Inc., an environmental consultant working on our behalf.

Based on information available to us at that time Mr. Wallace stated in that letter and I quote, **"Anco Products, Inc. has never used Trichlorethylene (TCE) in their manufacturing processes, and ask that you assist them in determining the source and or the responsible party."** We find that this information is not correct, that in fact, Anco Products did use Trichlorethylene in their manufacturing processes and although the quantities are not large they were significant and we feel we are obligated to correct the record.

By way of explanation, on or about June 1, 1981 the former management of Anco Products, Inc. resigned enmass and at the same time established their own business manufacturing the same product in the city. The entire management group, including all of the administrative staff, plant supervisory personnel and a large number of the hourly employees left the company at that time. For a period of two months the company was operated by representatives of the parent company in St. Paul, Minnesota.

Mr. Gary Luft, the present Controller, was hired in August of 1981 and I took responsibility as President of Anco Products, Inc. in October in 1981. It was necessary to hire and train an entirely new administrative and supervisory group. Our knowledge of the activities of the company prior to our coming were very limited and no personnel remained with the company, other than a few production workers who had little knowledge of the period in question. An examination of our records made at the time Mr. Wallace wrote you and our knowledge of the processes and activities of the plant at that time indicated that Trichlorethylene was not used in any significant quantities nor was it a part of our regular production processes.

Page 2

Ref: Information Sharing  
CERCLIS SITES  
Gemeinhardt and Bock Industries  
Elkhart County  
Elkhart, IN

As part of the review mentioned above, we discovered records dating back to 1979 confirming Anco purchases of quantities of Trichlorethylene. We have two production employees who were with the company at that time and based on their recollection we were told that the solvent was used to remove excess spray adhesive which had adhered to production equipment. This was accomplished by wiping the production equipment with the solvent. It is also their recollection that the solvent was all lost by means of evaporation and that no solvent was disposed of in liquid form.

Below you will find a summary of purchases of Trichlorethylene:

1979	1500 Gallons
1980	555 Gallons
1981	55 Gallons
1982	55 Gallons
1983	110 Gallons
1984	220 Gallons
1985	165 Gallons

---

2600 Gallons Total (1979 - 1985)

\*\*\*No purchases after the year of 1985.

Sincerely,  
Anco Products, Inc.

Howard J. Tomlinson  
President

cc: Gary Luft



Trichostylea dummaria

MADE IN U.S.A.

**Ashland****ASHLAND CHEMICAL COMPANY**

A DIVISION OF ASHLAND OIL, INC.

SEND REMITTANCE TO:

RECEIVED MAR 24 1977

PO BOX 51787  
CHICAGO ILLINOIS 60693PLEASE RETURN  
REMITTANCE ADVICE  
WITH YOUR PAYMENT.PLEASE REFER  
TO THIS NUMBER  
ON ALL  
CORRESPONDENCEANCO PRODUCTS  
1827 W. LUSHEN AVE  
ELKHART IN 46514

CUSTOMER NUMBER			INVOICE NUMBER
50	065	047260	050 435734

THIS SALE IS SUBJECT TO THE TERMS AND CONDITIONS  
OF THE INVOICE AND THE REMITTANCE HEREOF.\* TERMS: DISCOUNT DOES NOT APPLY TO FREIGHT OR TAXES.  
PAYMENTS NOT MADE WITHIN THE TERMS AND CONDITIONS  
INDICATED ARE SUBJECT TO A DELINQUENCY CHARGE  
BY THE SELLER. 006

OUR ORDER NO. 23347	CAR NUMBER	CUSTOMER ORDER NO.	F.O.B. DESTINATION
CONSIGNEE SAME		* TERMS NET 30 DAYS	DATE SHIPPED 213 03-11-77
		SHIPPED VIA OUR CARRIER	SHIPPED FROM SOUTH BEND
			INVOICE DATE 03-18-77

DESCRIPTION	GROSS QTY.	CONT.	GRAVITY	TEMP.	NET QUANTITY	UNIT PRICE	AMOUNT
TRICHLOROETHYLENE DEG COLD/VAP	330	T/W			330.00P	.22500	74.2

REMITTANCE ADVICE  
PLEASE RETURN WITH  
YOUR PAYMENT

● P = POUNDS H = CWT  
G = GALLONS T = TONS  
K = KILOGRAMS E = EACH

IF PAID IN ACCORDANCE WITH THE ABOVE TERMS

A DISCOUNT IN THE AMOUNT OF .00 WILL BE ALLOWED.

74.2

*Key as it is see if additional billing goes through***ATTENTION DIRECTOR OF PURCHASING:**

This is an acknowledgment of your purchase order and unless accompanying actual shipment of your order as stated herein, shall NOT constitute a commitment on SELLER's part to ship the product ordered. The price for all products ordered shall be the price in effect on the date of shipment for the quantity actually shipped.

This is a copy of your order as entered on our records. Should the above information be incorrect, please notify us promptly. Amounts not paid within specified terms are subject to a delinquency charge as determined by SELLER.

**TOTAL**  
**SEE REVERSE SIDE**  
**FOR**  
**TERMS & CONDITIONS****CASH SETTLEMENT**

CASH	
CHECKS	
C/M'S	
TOTAL	

THIS IS TO CERTIFY THAT THE ABOVE NAMED ARTICLES ARE PROPERLY CLASSIFIED, DESCRIBED, PACKAGED, MARKED, LABELED AND ARE IN PROPER CONDITION FOR TRANSPORTATION, ACCORDING TO THE APPLICABLE REGULATIONS OF THE DEP. OF TRANSPORTATION.

**WARNING: Excessive inhaling of solvent vapor or prolonged contact with skin may be harmful.**

NOTE: THE QUANTITY OF CONTAINERS BEING RECEIVED MAY NOT REFLECT THE AMOUNT OF CREDIT THAT WILL BE ISSUED. CREDIT WILL BE ISSUED UPON FURTHER INSPECTION AS TO REUSEABILITY.

5-CONTAINER ID. NUMBERS  
1-POLY CARBOYS  
2-GLASS CARBOYS  
3-DEL DRUM4-DEL BOY  
5-AL DRUMS  
6-POLY/STEEL DRUMS7-5/8 DRUMS  
8-STEEL DRUM  
9-GAS CYLINDER

METER READING:

DELIVERED BY:

RECEIVED BY:

**ACKNOWLEDGE****TAXES**—Existing taxes or any additional tax levied by any governmental authority on products herein named shall be to account of the buyer.  
**SALES TAX KEY**  
1=Taxable  
2=Exempt  
3=Hand Code1—SPECIAL LINE CODE  
2—MULTI-INVOICE CODE  
3—DRUM DEPOSIT  
0=No drum deposit  
1=Drum deposit  
2=Manual drum deposit  
3=Ashland container incl.4—HOW BILLED  
E=Each H=CWT  
G=Gallon T=Tons  
P=Pounds



**QADERN3**

LOCAL PAYROLLS

**2015**

WE SHIPPED 2 TEAMS

**ATTENTION: DIRECTOR OF PURCHASING.** All ship-  
ments shall be governed by the terms and conditions  
on the reverse side. Acceptance of delivery shall be  
deemed acceptance of such provisions. To order, firm,  
shall have effect unless otherwise signed.

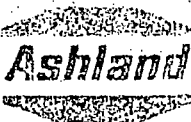
[illegible]

avoid contact with skin may be harmful!

**WILD NUMBER**  
**ARBOYS**  
STAY DOWN  
DEL BOY  
7-5 DRUMS  
5 BILLION

METER READING  
0-79

the named shall be to account of the bill

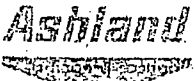
CUSTOMER ORDER NUMBER <b>NONE</b>		* TERMS <b>NET 30 DAYS</b>		SHIPPED FROM <b>SOUTH BEND</b>		SHIPPED VIA <b>OUR CARRIER</b>	
F.O.B. <b>DESTINATION</b>		DESCRIPTION		QUANTITY ORDERED	CONT.	TEMP.	NET QUANTITY
DATE SHIPPED <b>07-20-79</b>		INDIANA SALES TAX		<b>500</b>	<b>17W</b>		<b>6150.00</b>
INVOICE DATE <b>07-23-79</b>							<b>1629.75</b>
CAR NO.							<b>.26500</b>
SALESMAN <b>006</b>							<b>1629.75</b>
ID NO.							<b>.04000</b>
OUR ORDER NO. <b>60348</b>							<b>1629.75</b>
<b>213</b>							<b>1629.75</b>
<p>THIS SALE IS SUBJECT TO THE "TERMS AND CONDITIONS" SHOWN ON THE REVERSE SIDE HEREOF</p> <p>PLEASE REFER TO THIS NUMBER ON ALL CORRESPONDENCE</p>		 <p><b>Ashland</b></p> <p>ASHLAND CHEMICAL COMPANY A DIVISION OF ASHLAND OIL, INC.</p>					<b>1629.75</b>
<p>BILLING UNITS: P=POUNDS H=CWT G=GALLONS T=TONS K=KILOGRAMS E=EACH</p>							<b>1629.75</b>
INVOICE NUMBER <b>050 895163</b>		CUSTOMER NUMBER <b>50 065 047260</b>		<b>60348</b>		<p>PLEASE RETURN REMITTANCE ADVICE WITH YOUR PAYMENT</p>	
CONSIGNEE <b>ANCO PRODUCTS 2500 S 17TH ST ELKHART IN 46514</b>		<p>ANCO PRODUCTS 2500 S 17TH ELKHART IN 46514</p>				<p>PAYMENTS NOT MADE WITHIN THE TERMS AND CONDITIONS INDICATED ARE SUBJECT TO DELINQUENCY CHARGE</p>	
						<p>REMIT TO: <b>ASHLAND CHEMICAL COMPANY PO BOX 91787 CHICAGO ILL 60691</b></p>	

01436

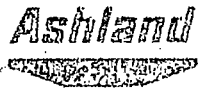
**ATTENTION DIRECTOR OF PURCHASING:** All ship-  
ments shall be governed by the Terms and Conditions  
on the reverse side. Acceptance of delivery shall be  
deemed acceptance of such provisions. No other terms  
shall have effect unless in writing, signed by Seller.

[illegible]

INGED CONTACT WITH SKIN MAY BE HARMFUL	
INNER ID. NUMBER	1. POLY STEEL DRUMS
2. CARBOYS	3. STEEL DRUMS
3. STEEL DRUMS	4. POLY CYLINDERS
4. POLY CYLINDERS	5. GAS CYLINDERS
PETER READING	
HEREIN NAMED SHALL BE TO ACCOUNT OF THE BUYER 4. HOW BILLED E = Each    H = CWT G = Gallon    T = Tons P = Pounds	
CUSTOMER'S COPY	

CUSTOMER ORDER NUMBER <b>NONE</b>		* TERMS <b>NET 30 DAYS</b>		SHIPPED FROM <b>SOUTH BEND</b>		SHIPPED VIA <b>OUR CARRIER</b>		
F.O.B.		DESCRIPTION	QUANTITY ORDERED	CONT.	TEMP.	NET QUANTITY	UNIT PRICE	AMOUNT
<b>DESTINATION</b>		<b>TRICHLOROETHYLENE DEG COLD/VAP</b>  <b>INDIANA SALES TAX</b>    <b>ASHLAND CHEMICAL COMPANY</b> <b>A DIVISION OF ASHLAND OIL INC.</b>	<b>500</b>	<b>T/H</b>		<b>6150.00</b>	<b>P</b>	<b>1,629.75</b>
DATE SHIPPED						<b>1629.75</b>		<b>65.19</b>
<b>08-24-79</b>								
INVOICE DATE								
<b>08-27-79</b>								
CAR NO.								
SALESMAN								
<b>006</b>								
ID NO.								
OUR ORDER NO.								
<b>61436</b>								
<b>213</b>								
THIS SALE IS SUBJECT TO THE "TERMS AND CONDITIONS" SHOWN ON THE REVERSE SIDE HEREOF								
PLEASE REFER TO THIS NUMBER ON ALL CORRESPONDENCE								
BILLING UNITS: P=POUNDS G=GALLONS K=KILOGRAMS H=CENT H=TONS E=EACH								<b>1,694.94</b>

INVOICE NUMBER 050 953402		CUSTOMER NUMBER 50 065 047260		61438		PLEASE RETURN REMITTANCE ADVICE WITH YOUR PAYMENT		PAYMENTS NOT MADE WITHIN THE TERMS AND CONDITIONS INDICATED ARE SUBJECT TO DELINQUENCY CHARGE BY SELLER.	
CONSIGNEE ANCO PRODUCTS 2500 S 17TH ST ELKHART IN 46514				ANCO PRODUCTS 2500 S 17TH ELKHART IN 46514		REMIT TO:		ASHLAND CHEMICAL COMPANY PO BOX 91787 CHICAGO ILLINOIS	

OUR ORDER NUMBER <b>NONE</b>		TERMS <b>NET 30 DAYS</b>		SHIPPED FROM <b>SOUTH BEND</b>		SHIPPED VIA <b>OUR CARRIER</b>	
F.O.B.		DESCRIPTION		QUANTITY ORDERED	CONT.	TEMP.	NET QUANTITY
DESTINATION <b>INDIANA SALES TAX</b>		<b>TRICHLOROETHYLENE DEG COLD/VAP</b>		<b>500</b>	<b>T/W</b>		<b>6150.00</b>
DATE SHIPPED <b>10-11-79</b>							<b>1629.75</b>
INVOICE DATE <b>10-13-79</b>							<b>.26500</b>
CAR NO.							<b>.04000</b>
SALESMAN <b>006</b>							<b>1,629.75</b>
ID NO.							<b>65.19</b>
OUR ORDER NO. <b>62964</b>							
<b>213</b>							
<p>THIS SALE IS SUBJECT TO THE "TERMS AND CONDITIONS" SHOWN ON THE REVERSE SIDE HEREOF</p> <p>PLEASE REFER TO THIS NUMBER ON ALL CORRESPONDENCE</p>		 <p><b>ASHLAND CHEMICAL COMPANY</b> A DIVISION OF ASHLAND OIL, INC.</p>					
<p>• BILLING UNITS: P = POUNDS H = CWT G = GALLONS T = TONS K = KILOGRAMS E = EACH</p>							<b>1,694.94</b>

INVOICE NUMBER <b>050 031561</b>	CUSTOMER NUMBER <b>50 065 047260</b>	<b>62964</b>
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**PLEASE RETURN  
REMITTANCE ADVICE  
WITH YOUR PAYMENT**

PAYMENTS NOT MADE WITHIN THE TERMS AND CONDITIONS INDICATED ARE SUBJECT TO DELINQUENCY CHARGE BY SELLER.

CONSIGNEE  
**ANCO PRODUCTS  
2500 S 17TH ST  
ELKHART IN 46514**

**ANCO PRODUCTS  
2500 S 17TH  
ELKHART IN 46514**

**REMIT  
TO:**  
**ASHLAND CHEMICAL COMPANY  
PO BOX 91787  
CHICAGO ILLINOIS 60693**









**THE**

**\*ATTENTION DIRECTOR OF PURCHASING:** All ship-  
ments shall be governed by the Terms and Conditions  
on the "reverse side." Acceptance of delivery shall be deemed  
acceptance of such provisions. No other terms  
shall have effect unless in writing signed by Seller.

cribed, packaged, marked

ER.L.D. NUMBERS	
ARBOYS	7. S/5 DRUMS
1. DEL BOY	8. STEEL DRUMS
2. ALDRUMS	9. GAS CYLINDERS
3. POLY/STEEL DRUMS	

**4—HOW BILLED.**  
E = Each. H = CWT.  
G = Gallon. T = Tons  
P = Pounds

**CUSTOMER'S COPY**

273.97REMIT  
TO:

ASHLAND CHEMICAL COMPANY  
PO BOX 91787  
CHICAGO ILLINOIS 60693







**Ashland****ASHLAND CHEMICAL COMPANY**  
DIVISION OF ASHLAND OIL, INC.  
INDUSTRIAL CHEMICALS AND SOLVENTS DIVISION

SALES ORDER - 9221A

CO. NO.	DIV	ORG	ACCOUNT NO.	DEST.	SLSM	SHIPPED VIA	SHIP FROM (CITY AND STATE)	TIME	DATE OF ORDER	ORDER NUMBER
							SHIP-1, DEST-2	FREIGHT PPD-1, COLL-2	SHIP CODE TC-1, LTL-2	TERMS
							DATE SHIPPED 3-14-83	CUSTOMER ORDER AND REQ. NO.		TRUCK NO. 1567
									TANK NO.	DELIVERED BY Bate

SHIP TO

ATTENTION DIRECTOR OF PURCHASING: All shipments shall be governed by the Terms and Conditions on the reverse side. Acceptance of delivery shall be deemed acceptance of such provisions. No other terms shall have effect unless in writing signed by the seller.

THIS IS TO CERTIFY THAT THE BELOW NAMED MATERIALS ARE PROPERLY CLASSIFIED, DESCRIBED, PACKAGED, MARKED AND LABELED, AND ARE IN PROPER CONDITION FOR TRANSPORTATION ACCORDING TO THE APPLICABLE REGULATIONS OF THE DEPARTMENT OF TRANSPORTATION.

1	2	PRODUCT CODE	CONT. CODE	✓	HM	DESCRIPTION	QUANTITY ORD	QTY/CTR	DRUM CODE	TEMP.	NET QUANTITY SHIPPED	BILLING QUANTITY
						TRICHLOROETHYLENE DEG COLD/VAP						
						55 GAL REGULAR DRUM						
						INDIANA SALES TAX						

CUSTOMER ORDER NUMBER 1474		TERMS NET 30 DAYS		SHIPPED FROM SOUTH BEND		SHIPPED VIA OUR CARRIER	
DATE SHIPPED 03-10-83	INVOICE DATE 03-10-83	CAR NO.	SALESMAN 001	ID NO.	OUR ORDER NO. 05938	213	
THIS SALE IS SUBJECT TO THE "TERMS AND CONDITIONS" SHOWN ON THE REVERSE SIDE HEREOF.		PLEASE REFER TO THIS NUMBER ON ALL CORRESPONDENCE.					
BILLING UNITS: P=POUNDS, Q=GALLONS, K=KILOGRAMS, H=CWT, T=TONS, E=EACH							
INVOICE NUMBER 050 952610		CUSTOMER NUMBER 50 065 047260		05938			
CONSIGNEE ANCO PRODUCTS 2500 S 17TH ST ELKHART		ANCO PRODUCTS 2500 S 17TH ELKHART		IN 46514			

REMIT TO:

ASHLAND CHEMICAL COMPANY  
PO BOX 91787  
CHICAGO ILLINOIS 60643



**ASHLAND CHEMICAL COMPANY**  
DIVISION OF ASHLAND OIL, INC.  
INDUSTRIAL CHEMICALS AND SOLVENTS DIVISION

SALES ORDER - 9221A REGULAR ORDER

TIME 12:40	DATE OF ORDER 12-22-83	ORDER NUMBER 14930
NO. DIV 5150	ORG 005	ACCOUNT NO. 0475600
DEST. IND	SLSM 005	SHIPPED VIA
SHIP FROM (CITY AND STATE) SOUTH BEND	SHIP-1, DEST-2 PPD-1, COLL-2 TC-1, LTL-2	TERMS OC
DATE SHIPPED 12-8-83	CUSTOMER ORDER AND REQ. NO. 001	TRUCK NO. 7819
		TANK NO. 403
		DELIVERED BY

SHIP TO

ASHLAND PRODUCTS  
2500 S 12TH ST  
CHICAGO, ILL 60623

IN 46514

ATTENTION DIRECTOR OF PURCHASING: All shipments shall be governed by the Terms and Conditions on the reverse side. Acceptance of delivery shall be deemed acceptance of such provisions. No other terms shall have effect unless in writing signed by the seller.

THIS IS TO CERTIFY THAT THE BELOW NAMED MATERIALS ARE PROPERLY CLASSIFIED, DESCRIBED, PACKAGED, MARKED AND LABELED, AND ARE IN PROPER CONDITION FOR TRANSPORTATION ACCORDING TO THE APPLICABLE REGULATIONS OF THE DEPARTMENT OF TRANSPORTATION.

1	2	PRODUCT CODE	CONT. CODE	✓	HM	DESCRIPTION	QUANTITY ORD	QTY	DRUM	TEMP.	NET QUANTITY SHIPPED	BILLING QUANTITY
							QUANTITY	UM	CTR	CODE		
						TRICHLOROETHYLENE	1	UM			1.00	1.00
						INDIAN SALES TAX						

ASHLAND CHEMICAL COMPANY P.O. BOX 93263 CHICAGO, ILLINOIS 60673	REMIT TO:	IN 46514	ELKHART 2500 S 12TH ST ELKHART IN 46514	CONSIGNEE ASHLAND PRODUCTS 2500 S 12TH ST ELKHART IN 46514
PAYMENTS NOT MADE WITHIN THE TERMS AND CONDITIONS INDICATED, ARE SUBJECT TO DELINQUENCY CHARGE BY SELLER.		PLEASE RETURN REMITTANCE ADVISE WITH YOUR PAYMENT	14930	050-420224-55-045-047250
			CUSTOMER NUMBER	INVOICE NUMBER

CUSTOMER ORDER NUMBER										NET 30 DAYS										SOUTH BEND										OUR CARRIER																																																																					
F.O.B.										QUANTITY ORDERED										CONT.										TEMP.										NET QUANTITY										UNIT PRICE										AMOUNT																																							
DESTINATION										TRICHLOROETHYLENE DEG COLD/VAP										1 DEG																				465.00										465.00										306.90										20.00										20.00										15.35									
DATE SHIPPED										55 GAL REGULAR DRUM																														3.00										20.00000										20.00										15.35																													
INVOICE DATE																																								2.00										20.00000										20.00										15.35																													
CAR NO.																																																		20.00										20.00										15.35																													
SALESMAN																																																		20.00										20.00										15.35																													
D NO.																																																		20.00										20.00										15.35																													
OUR ORDER NO.																																																		20.00										20.00										15.35																													
CORRESPONDENCE										PLEASE REFER TO THIS NUMBER ON ALL																																								20.00										20.00										15.35																													
THIS SALE IS SUBJECT TO THE TERMS AND CONDITIONS SHOWN ON THE REVERSE SIDE HEREOF																																																		20.00										20.00										15.35																													
BILLING UNITS: P=POUNDS G=GALLONS K=KILOGRAMS T=TONS E=EACH H=CWT																																																		20.00										20.00										15.35																													
52.24																																																		20.00										20.00										15.35																													



**ASHLAND CHEMICAL COM NY**  
DIVISION OF ASHLAND OIL, INC.  
INDUSTRIAL CHEMICALS AND SOLVENTS DIVISION

LES ORDER - 9221A

TIME	DATE OF ORDER	ORDER NUMBER
FOR SHIP-1, DEST-2	FRIGHT PPD-1, COLL-2	SHIP CODE TC-1, LTL-2
TERMS	OCO	REQUESTED SHIP DATE
DATE SHIPPED	CUSTOMER ORDER AND REQ. NO.	TRUCK NO.
		TANK NO.
		DELIVERED BY

NO	DIV	ORG	ACCOUNT NO.	DEST.	SLSM	SHIPPED VIA
1	52	005	01 0000		000	

SHIP TO  
ANCO PRODUCTS  
2500 S 17TH ST  
ELKHART IN 46514

ATTENTION DIRECTOR OF PURCHASING: All shipments shall be governed by the Terms and Conditions on the reverse side. Acceptance of delivery shall be deemed acceptance of such provisions. No other terms shall have effect unless in writing signed by the seller.

THIS IS TO CERTIFY THAT THE BELOW NAMED MATERIALS ARE PROPERLY CLASSIFIED, DESCRIBED, PACKAGED, MARKED AND LABELED, AND ARE IN PROPER CONDITION FOR TRANSPORTATION ACCORDING TO THE APPLICABLE REGULATIONS OF THE DEPARTMENT OF TRANSPORTATION.

2	PRODUCT CODE	CONT. CODE	✓	HM	DESCRIPTION	QUANTITY ORD	QTY / CTR	DRUM CODE	TEMP.	NET QUANTITY SHIPPED	BILLING QUANTITY
						QUANTITY	UM				

<b>REMIT TO:</b> ASHLAND CHEMICAL COMPANY P.O. BOX 93293 CHICAGO, ILLINOIS 60673	IN 46514 ELKHART 2500 S 17TH ST ANCO PRODUCTS	INVOICE NUMBER 050 613942	CUSTOMER NUMBER 047250	50 065 047250
---	--	------------------------------	---------------------------	---------------------

REMITTANCE ADVISE PLEASE RETURN WITH YOUR PAYMENT	15.35 20.00 306.90	05000 20.00000 46500	306.90 1.00 660.00	1 DRM	TRICHLOROETHYLENE DEG COLD/VAP 55 GAL REGULAR DRUM INDIANA SALES TAX 002204	BILLING UNITS: P=POUNDS, G=GALLONS, T=TONS, K=KILOGRAMS, F=FACH, H=CWT THIS SALE IS SUBJECT TO THE TERMS AND CONDITIONS SHOWN ON THE REVERSE SIDE HEREOF PLEASE REFER TO THIS NUMBER ON ALL CORRESPONDENCE
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ASHLAND CHEMICAL COMPANY  
DIVISION OF ASHLAND OIL, INC.  
INDUSTRIAL CHEMICALS AND SOLVENTS DIVISION

SALES ORDER - 9221A

TIME	DATE OF ORDER	ORDER NUMBER
SHIP-1, DEST-2	PPD-1, COLL-2	SHIP CODE TC-1, LTL-2
TERMS	OCO	REQUESTED SHIP DATE
DATE SHIPPED	CUSTOMER ORDER AND REQ. NO.	TRUCK NO.
		TANK NO.
		DELIVERED BY

CO. NO.	DIV	ORG	ACCOUNT NO.	DEST.	SLSM	SHIPPED VIA
---------	-----	-----	-------------	-------	------	-------------

SHIP FROM	(CITY AND STATE)
-----------	------------------

SHIP TO

ATTENTION DIRECTOR OF PURCHASING: All shipments shall be governed by the Terms and Conditions on the reverse side. Acceptance of delivery shall be deemed acceptance of such provisions. No other terms shall have effect unless in writing signed by the seller.

THIS IS TO CERTIFY THAT THE BELOW NAMED MATERIALS ARE PROPERLY CLASSIFIED, DESCRIBED, PACKAGED, MARKED AND LABELED, AND ARE IN PROPER CONDITION FOR TRANSPORTATION ACCORDING TO THE APPLICABLE REGULATIONS OF THE DEPARTMENT OF TRANSPORTATION.

1	2	PRODUCT CODE	CONT. CODE	✓	HM	DESCRIPTION	QUANTITY ORD	QTY	DRUM	TEMP.	NET QUANTITY SHIPPED	BILLING QUANTITY
						DRM-A						

ASHLAND CHEMICAL COMPANY P.O. BOX 7323 CHICAGO, ILLINOIS 60673	REMIT TO:	IN 46524	ELKHART 3500 S 17TH ST ELKHART IN 46524	CONSIGNEE ANCO PRODUCTS 3500 S 17TH ST ELKHART IN 46524	INVOICE NUMBER 050 762439	CUSTOMER NUMBER 095 047269
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DESCRIPTION	QUANTITY ORDERED	CONT.	TEMP.	NET QUANTITY	UNIT PRICE	AMOUNT
TRICHLOROETHYLENE DEG COLO/VAP	55 GAL REGULAR DRUM	DRM		55.00	4.9500	272.25
INDIANA SALES TAX						20.00
						16.34

**Ashland**DIVISION OF ASHLAND OIL, INC.  
INDUSTRIAL CHEMICALS AND SOLVENTS DIVISION

SALES ORDER - 9221A

REGULAR ORDER

0. NO.	DIV	ORG	ACCOUNT NO.	DEST.	SLSM	SHIPPED VIA	SHIP FROM (CITY AND STATE)	FOR SHIP-1, DEST-2	FREIGHT PPD-1, COLL-2	SHIP CODE TC-1, LTL-2	TERMS	OCO	REQUESTED SHIP DATE
55	550	065	0472600		0000		INDIAN HEND						
SHIP TO ANDU PRODUCTS 2500 S 17TH ST ELKHART							DATE SHIPPED 8-28-84	CUSTOMER ORDER AND REQ NO. 1075			TRUCK NO. 1567	TANK NO.	DELIVERED BY Bate

ATTENTION DIRECTOR OF PURCHASING: All shipments shall be governed by the Terms and Conditions on the reverse side. Acceptance of delivery shall be deemed acceptance of such provisions. No other terms shall have effect unless in writing signed by the seller.

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1	2	PRODUCT CODE	CONT. CODE	HM	DESCRIPTION	QUANTITY ORD	QTY / CTR	DRUM CODE	TEMP.	NET QUANTITY SHIPPED	BILLING QUANTITY
					INDIAN HEND						

CUSTOMER ORDER NUMBER

7028

F.O.B.

DESTINATION

DATE SHIPPED

08-28-84

INVOICE DATE

08-29-84

CAR NO

SALESMAN

006

ID NO.

OUR ORDER NO.

23937

213

THIS SALE IS SUBJECT TO THE TERMS AND CONDITIONS SHOWN ON THE REVERSE SIDE HEREOF

PLEASE REFER TO THIS NUMBER ON ALL CORRESPONDENCE

\* BILLING UNITS: P=POUNDS G=GALLONS K=KILOGRAMS H=HWT T=TONS E=EACH

INVOICE NUMBER	CUSTOMER NUMBER		
050 883302	50	065	047260

23937

CONSIGNEE  
ANDU PRODUCTS  
2500 S 17TH ST  
ELKHART

IN 46564

ANDU PRODUCTS  
2500 S 17TH  
ELKHART

IN 46564

REMIT TO:

ASHLAND CHEMICAL COMPANY  
PO BOX 93263  
CHICAGO, IL 60673



**ASHLAND CHEMICAL COMPANY**  
DIVISION OF ASHLAND OIL, INC.  
INDUSTRIAL CHEMICALS AND SOLVENTS DIVISION

SALES ORDER - 9221A

REGULAR ORDER

CO. NO.	DIV	ORG	ACCOUNT NO.	DEST.	SLSM	SHIPPED VIA	SHIP FROM (CITY AND STATE)	DATE SHIPPED	CUSTOMER ORDER AND REQ. NO.	TIME	DATE OF ORDER	ORDER NUMBER	TERMS	OC	REQUESTED SHIP DATE
5	50	005	0472600		005			11-6	7117						

SHIP TO

ANCO PRODUCTS  
2500 S 17TH ST  
ELKHART

IN 46514

ATTENTION DIRECTOR OF PURCHASING: All shipments shall be governed by the Terms and Conditions on the reverse side. Acceptance of delivery shall be deemed acceptance of such provisions. No other terms shall have effect unless in writing signed by the seller.

THIS IS TO CERTIFY THAT THE BELOW NAMED MATERIALS ARE PROPERLY CLASSIFIED, DESCRIBED, PACKAGED, MARKED AND LABELED, AND ARE IN PROPER CONDITION FOR TRANSPORTATION ACCORDING TO THE APPLICABLE REGULATIONS OF THE DEPARTMENT OF TRANSPORTATION.

1	2	PRODUCT CODE	CONT. CODE	✓	HM	DESCRIPTION	QUANTITY ORD	QUANTITY UM	QTY CTR	DRUM CODE	TEMP.	NET QUANTITY SHIPPED	BILLING QUANTITY
		3060500	044		X	111 TRICHLOROETHANE	1	500#	1			1.00	

CUSTOMER ORDER NUMBER

7117

\* TERMS

NET 30 DAYS

SHIPPED FROM

SOUTH BEND

SHIPPED VIA

OUR CARRIER

F.O.B.  
DESTINATION

DATE SHIPPED

11-06-84

INVOICE DATE

11-06-84

CAR NO.

SALESMAN

706

ID NO.

OUR ORDER NO.

26351

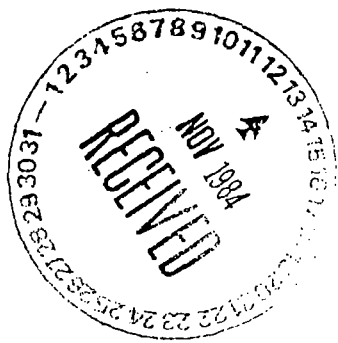
213

ORIGINAL INVOICE

THIS SALE IS SUBJECT TO THE "TERMS AND CONDITIONS" SHOWN ON THE REVERSE SIDE HEREOF

PLEASE REFER TO THIS NUMBER ON ALL CORRESPONDENCE

\* BILLING UNITS P=POUNDS G=GALLONS K=KILOGRAMS T=TONS E=EACH



CUSTOMER NUMBER				26351		PLEASE RETURN REMITTANCE ADVICE WITH YOUR PAYMENT	PAYMENTS NOT MADE WITHIN THE TERMS AND CONDITIONS INDICATED ARE SUBJECT TO LATE PAYMENT CHARGE BY SELLER.	REMIT TO:	ASHLAND CHEMICAL COMPANY PO BOX 73263 CHICAGO, IL 60673
017676	50	065	047260	ANCO PRODUCTS 2500 S 17TH ST ELKHART IN 46514					







**ASHLAND CHEMICAL COMPANY**  
DIVISION OF ASHLAND OIL, INC.  
INDUSTRIAL CHEMICALS AND SOLVENTS DIVISION

SALES ORDER - 9221A

NO.	DIV	ORG	ACCOUNT NO.	DEST.	SLSM	SHIPPED VIA	SHIP FROM (CITY AND STATE)	FOR SHIP-1, DEST-2	FREIGHT PPD-1, COLL-2	SHIP CODE TC-1, LTL-2	TERMS	OCO	REQUESTED SHIP DATE
5	10	207	217-0000		0700								
DATE SHIPPED							CUSTOMER ORDER AND REQ. NO.			TRUCK NO.		TANK NO.	DELIVERED BY

SHIP TO

ANCO PRODUCTS  
2500 S 17TH ST  
ELKHART

IN 46514

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1	2	PRODUCT CODE	CONT. CODE	✓	HM	DESCRIPTION	QUANTITY ORD	QTY / CTR	DRUM CODE	TEMP.	NET QUANTITY SHIPPED	BILLING QUANTITY
		0000500	141			111 TRICHLOROETHANE DRM-A	1	1	1		1.00	1.00

CUSTOMER ORDER NUMBER  
**7233**

TERMS  
**NET 30 DAYS**

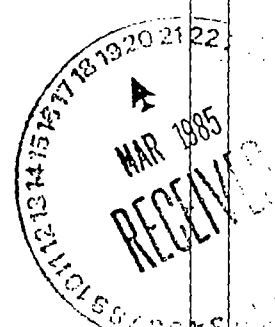
SHIPPED FROM

**SOUTH BEND**

SHIPPED VIA

**OUR CARRIER**

F.O.B.	DESCRIPTION	QUANTITY ORDERED	CONT.	TEMP.	NET QUANTITY	UNIT PRICE	AMOUNT
DESTINATION	TRICHLOROETHANE 111 DEGRS COLD/V	1	DRM		538.00	P .51500	302.80
DATE SHIPPED 03-12-85	55 GAL REGULAR DRUM				1.00	E 20.00000	20.00
INVOICE DATE 03-12-85	INDIANA SALES TAX				302.62	.05000	15.14
CAR NO.							
SALESMAN 006							
ID NO.							
OUR ORDER NO. 30030							
213							
ORIGINAL RECEIPT							
THIS SALE IS SUBJECT TO THE "TERMS AND CONDITIONS" SHOWN ON THE REVERSE OF THIS ORDER.							
PLEASE REFER TO THIS NUMBER ON ALL CORRESPONDENCE							
BILLING UNITS: P=POUNDS H=CWT G=GALLONS T=TONS K=KILOGRAMS L=LBS							337.96



INVOICE NUMBER	CUSTOMER NUMBER
050 231789	50 065 047260

30030

CONSIGNEE  
ANCO PRODUCTS  
2500 S 17TH ST  
ELKHART

IN 46514

ANCO PRODUCTS  
2500 S 17TH  
ELKHART

IN 46514

REMIT TO:

ASHLAND CHEMICAL COMPANY  
PO BOX 93263  
CHICAGO, IL 60673



**ASHLAND CHEMICAL COMPANY**  
DIVISION OF ASHLAND OIL, INC.  
INDUSTRIAL CHEMICALS AND SOLVENTS DIVISION

PAGE: 1

SALES ORDER - 9221A

REPLY BY ORDER

00011

TIME	DATE OF ORDER	ORDER NUMBER
10:14	05/22/85	32142
SHIP-1, DEST-2	FREIGHT	SHIP CODE
2	1	2
PPD-1, COLL-2	TERMS	OCO
	31	N
DATE SHIPPED	CUSTOMER ORDER AND REQ. NO.	TRUCK NO.
05-23-85	7306	7967
TANK NO.	DELIVERED BY	
	Bate	

SHIP TO

ANCO PRODUCTS  
2500 S 17TH ST  
ELKHART

IN 46514

ATTENTION DIRECTOR OF PURCHASING: All shipments shall be governed by the Terms and Conditions on the reverse side. Acceptance of delivery shall be deemed acceptance of such provisions. No other terms shall have effect unless in writing signed by the seller.

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1	2	PRODUCT CODE	CONT. CODE	HM	DESCRIPTION	QUANTITY ORD	QTY	DRUM	TEMP.	NET QUANTITY SHIPPED	BILLING QUANTITY
						QUANTITY	UM	CTR			
		3068500	044		111 TRICHLOROETHANE DRM-A	1	55				

CUSTOMER ORDER NUMBER  
7306

DESTINATION  
DATE SHIPPED

05-23-85

INVOICE DATE  
05-23-85

SALESMAN  
006

ID NO.

OUR ORDER NO.  
32142

213

ORIGINAL INVOICE

THIS BILL IS SUBJECT TO THE "TERMS AND CONDITIONS" SHOWN ON THE REVERSE SIDE HEREOF

PLEASE REFER TO THIS NUMBER ON ALL CORRESPONDENCE

NET 30 DAYS  
DESCRIPTION  
TRICHLOROETHANE 111 DEGRS COLD/V  
55 GAL REGULAR DRUM  
INDIANA SALES TAX



BILLING UNITS: P= POUNDS H= CWT  
G= GALLONS T= TONS  
K= KILOGRAMS E= EACH

QUANTITY ORDERED	CONT.	TEMP.	NET QUANTITY	UNIT PRICE	AMOUNT
1	DRM		558.00	P .51500	302.82
			1.00	E 20.00000	20.00
			302.82	.05000	15.14
					337.96

INVOICE NUMBER: 050 372436  
CUSTOMER NUMBER: 50 065 047260

32142

ANCO PRODUCTS  
2500 S 17TH ST  
ELKHART

IN 46514

REMIT TO:

ASHLAND CHEMICAL COMPANY  
PO BOX 93263  
CHICAGO, IL 6067



## Air Quality Permit Status Search

## Search Results

Please click on the permit number to return further details on that specific source and permit.  
To sort results select **Permit Type**, **Permit Status**, or **Status Date**.

1-10 | [next](#) | out of 93 | [Revise Search](#)

**Source Name:** Anco Products Inc  
**Source ID:** 039-00069  
**Source Location:** 2500 S 17th St Elkhart IN 46517  
**County:** Elkhart

<u>Permit #</u>	<u>Permit Type</u> <u>Permit Sub-Type</u>	<u>Permit Status</u>	<u>Status Date</u>
<a href="#">039-28476-00069</a>	Title V Significant Permit Modification	Issued	04/27/2010
<a href="#">039-24991-00069</a>	Title V Administrative Amendment	Withdrawn	08/02/2007
<a href="#">039-17563-00069</a>	Title V Renewal	Issued	06/21/2007
<a href="#">039-24665-00069</a>	Undetermined	Combined	05/01/2007
<a href="#">039-24295-00069</a>	Title V Administrative Amendment	Issued	02/21/2007
<a href="#">039-20097-00069</a>	Title V Administrative Amendment	Issued	09/21/2005
<a href="#">039-13210-00069</a>	Title V Reopen - Cont. vs Intermittent Compliance	Issued	12/18/2001
<a href="#">039-9008-00069</a>	Title V	Issued	12/31/1998
<a href="#">039-8111-00069</a>	FESOP Minor Permit Revision	Issued	08/02/1997
<a href="#">039-6389-00069</a>	FESOP	Issued	12/12/1996

1-10 | [next](#) | out of 93 | [Revise Search](#)

[IDEM Home](#) | [Air Quality Home](#)



## INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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*Mitchell E. Daniels Jr.*  
Governor

*Thomas W. Easterly*  
Commissioner

100 North Senate Avenue  
Indianapolis, Indiana 46204  
(317) 232-8603  
Toll Free (800) 451-6027  
[www.idem.IN.gov](http://www.idem.IN.gov)

**SENT VIA U.S. MAIL: CONFIRMED DELIVERY AND SIGNATURE REQUESTED**

TO: Andrew McCleery  
GM  
Anco Products, Inc.  
2500 S. 17th St.  
Elkhart IN 46517

DATE: Apr. 27, 2010

FROM: Matt Stuckey, Branch Chief  
Permits Branch  
Office of Air Quality

SUBJECT: Final Decision  
Significant Permit Modification  
039-28476-00069

Enclosed is the final decision and supporting materials for the air permit application referenced above. Please note that this packet contains the original, signed, permit documents.

The final decision is being sent to you because our records indicate that you are the contact person for this application. However, if you are not the appropriate person within your company to receive this document, please forward it to the correct person.

A copy of the final decision and supporting materials has also been sent via standard mail to:  
Randy Martin Safety & Environmental Services, Inc.  
OAQ Permits Branch Interested Parties List

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178, or toll-free at 1-800-451-6027 (ext. 3-0178), and ask to speak to the permit reviewer who prepared the permit. If you think you have received this document in error, please contact Joanne Smiddie-Brush of my staff at 1-800-451-6027 (ext 3-0185), or via e-mail at [jbrush@idem.IN.gov](mailto:jbrush@idem.IN.gov).

Final Applicant Cover letter.dot 11/30/07



## INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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Toll Free (800) 451-6027  
[www.idem.IN.gov](http://www.idem.IN.gov)

TO: Interested Parties / Applicant

DATE: April 27, 2010

RE: Anco Products, Inc. / 039-28476-00069

FROM: Matthew Stuckey, Branch Chief  
Permits Branch  
Office of Air Quality

### Notice of Decision: Approval – Effective Immediately

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to IC 13-17-3-4 and 326 IAC 2, this permit modification is effective immediately, unless a petition for stay of effectiveness is filed and granted, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

If you wish to challenge this decision, IC 4-21.5-3-7 and IC 13-15-7-3 require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office Environmental Adjudication, 100 North Senate Avenue, Government Center North, Suite N 501E, Indianapolis, IN 46204, **within eighteen (18) days of the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

- (1) the date the document is delivered to the Office of Environmental Adjudication (OEA);
- (2) the date of the postmark on the envelope containing the document, if the document is mailed to OEA by U.S. mail; or
- (3) The date on which the document is deposited with a private carrier, as shown by receipt issued by the carrier, if the document is sent to the OEA by private carrier.

The petition must include facts demonstrating that you are either the applicant, a person aggrieved or adversely affected by the decision or otherwise entitled to review by law. Please identify the permit, decision, or other order for which you seek review by permit number, name of the applicant, location, date of this notice and all of the following:

- (1) the name and address of the person making the request;
- (2) the interest of the person making the request;
- (3) identification of any persons represented by the person making the request;
- (4) the reasons, with particularity, for the request;
- (5) the issues, with particularity, proposed for considerations at any hearing; and
- (6) identification of the terms and conditions which, in the judgment of the person making the request, would be appropriate in the case in question to satisfy the requirements of the law governing documents of the type issued by the Commissioner.



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
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100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251  
(317) 232-8603  
Toll Free (800) 451-6027  
[www.idem.IN.gov](http://www.idem.IN.gov)

Mr. Andy McCleery  
Anco Products, Inc.  
2500 South 17th Street  
Elkhart, IN 46517

Apr. 27, 2010

Re: 039-28476-00069  
1st Significant Permit Modification to:  
Part 70 permit No.: T 039-17563-00069

Dear Mr. McCleery:

Anco Products, Inc. was issued Part 70 operating permit T 039-28476-00069 on June 21, 2007, for a stationary fiberglass insulation production source. A letter requesting changes to this permit was received on September 11, 2009. Pursuant to the provisions of 326 IAC 2-7-12 a significant permit modification to this permit is hereby approved as described in the attached Technical Support Document.

The modification involves the deletion of VOC and PM testing requirements for an existing curing oven, and associated changes to compliance monitoring conditions.

All other conditions of the permit shall remain unchanged and in effect. Please find enclosed the entire revised permit.

This decision is subject to the Indiana Administrative Orders and Procedures Act – IC 4-21.5-3-5. If you have any questions on this matter, please contact Madhurima Moulik, OAQ, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251, or call at (800) 451-6027, and ask for Madhurima Moulik or extension (3-0868), or dial (317) 233-0868.

Sincerely,

Chrystal Wagner, Section Chief  
Permits Branch  
Office of Air Quality

Attachments

MDM

cc: File - Elkhart County  
Elkhart County Health Department  
Air Compliance and Enforcement





# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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## PART 70 OPERATING PERMIT RENEWAL OFFICE OF AIR QUALITY

**Anco Products, Inc.**  
**2500 S 17th Street**  
**Elkhart, Indiana 46517**

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

The Permittee must comply with all conditions of this permit. Noncompliance with any provisions of this permit is grounds for enforcement action; permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. Noncompliance with any provision of this permit, except any provision specifically designated as not federally enforceable, constitutes a violation of the Clean Air Act. It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. An emergency does constitute an affirmative defense in an enforcement action provided the Permittee complies with the applicable requirements set forth in Section B, Emergency Provisions.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Operation Permit No.: T039-17563-00069

Issued by: *Original document signed by*


Nisha Sizemore, Chief  
Permits Branch  
Office of Air Quality

Issuance Date: June 21, 2007

Expiration Date: June 21, 2012

1st Significant Permit Modification No.: 039-28476-00069

Issued by:

  
Chrystal Wagner, Section Chief  
Permits Branch  
Office of Air Quality

Issuance Date: Apr. 27, 2010

Expiration Date: June 21, 2012

- C.18 General Record Keeping Requirements[326 IAC 2-7-5(3)] [326 IAC 2-7-6]
- C.19 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11]
- C.20 Compliance with 40 CFR 82 and 326 IAC 22-1

**SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS**

- D.1.1 Particulate [326 IAC 6-3-2]
- D.1.2 Preventive Maintenance Plan [326 IAC 2-7-5(13)]
- D.1.3 Particulate
- D.1.4 Thermal Oxidizer
- D.1.5 Visible Emissions Notations
- D.1.6 Weekly Inspections
- D.1.7 Failure Detection
- D.1.8 Record Keeping Requirements

**SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS**

- D.2.1 Particulate [326 IAC 6-3-2]
- D.2.2 Particulate [326 IAC 6-3-2]
- D.2.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]
- D.2.4 Particulate

**Certification**

**Emergency Occurrence Report**

**Quarterly Deviation and Compliance Monitoring Report**

A.4 Part 70 Permit Applicability [326 IAC 2-7-2]

This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

- (a) It is a major source, as defined in 326 IAC 2-7-1(22);
- (b) It is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability).

**B.8 Certification [326 IAC 2-7-4(f)][326 IAC 2-7-6(1)][326 IAC 2-7-5(3)(C)]**

---

- (a) Where specifically designated by this permit or required by an applicable requirement, any application form, report, or compliance certification submitted shall contain certification by the "responsible official" of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- (b) One (1) certification shall be included, using the attached Certification Form, with each submittal requiring certification. One (1) certification may cover multiple forms in one (1) submittal.
- (c) The "responsible official" is defined at 326 IAC 2-7-1(34).

**B.9 Annual Compliance Certification [326 IAC 2-7-6(5)]**

---

- (a) The Permittee shall annually submit a compliance certification report which addresses the status of the source's compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. All certifications shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted no later than April 15 of each year to:

Indiana Department of Environmental Management  
Compliance Branch, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251

and

United States Environmental Protection Agency, Region V  
Air and Radiation Division, Air Enforcement Branch - Indiana (AE-17J)  
77 West Jackson Boulevard  
Chicago, Illinois 60604-3590

- (b) The annual compliance certification report required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- (c) The annual compliance certification report shall include the following:
  - (1) The appropriate identification of each term or condition of this permit that is the basis of the certification;
  - (2) The compliance status;
  - (3) Whether compliance was continuous or intermittent;
  - (4) The methods used for determining the compliance status of the source, currently and over the reporting period consistent with 326 IAC 2-7-5(3); and
  - (5) Such other facts, as specified in Sections D of this permit, as IDEM, OAQ may require to determine the compliance status of the source.

The submittal by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (5) For each emergency lasting one (1) hour or more, the Permittee submitted the attached Emergency Occurrence Report Form or its equivalent, either by mail or facsimile to:

Indiana Department of Environmental Management  
Compliance Branch, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251

and

IDEM Northern Regional Office  
220 West Colfax Avenue, Suite 200  
South Bend, Indiana 46601-1634

within two (2) working days of the time when emission limitations were exceeded due to the emergency.

The notice fulfills the requirement of 326 IAC 2-7-5(3)(C)(ii) and must contain the following:

- (A) A description of the emergency;
- (B) Any steps taken to mitigate the emissions; and
- (C) Corrective actions taken.

The notification which shall be submitted by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (6) The Permittee immediately took all reasonable steps to correct the emergency.
- (c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
  - (d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.
  - (e) The Permittee seeking to establish the occurrence of an emergency shall make records available upon request to ensure that failure to implement a PMP did not cause or contribute to an exceedance of any limitations on emissions. However, IDEM, OAQ may require that the Preventive Maintenance Plans required under 326 IAC 2-7-4(c)(9) be revised in response to an emergency.
  - (f) Failure to notify IDEM, OAQ by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-7 and any other applicable rules.
  - (g) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.

- (g) This permit shield is not applicable to minor Part 70 permit modifications until after IDEM, OAQ, has issued the modification. [326 IAC 2-7-12(b)(8)]

**B.13 Prior Permits Superseded [326 IAC 2-1.1-9.5][326 IAC 2-7-10.5]**

---

- (a) All terms and conditions of permits established prior to T039-17563-00069 and issued pursuant to permitting programs approved into the state implementation plan have been either:
- (1) incorporated as originally stated,
  - (2) revised under 326 IAC 2-7-10.5, or
  - (3) deleted under 326 IAC 2-7-10.5.
- (b) All previous registrations and permits are superseded by this permit.

**B.14 Termination of Right to Operate [326 IAC 2-7-10][326 IAC 2-7-4(a)]**

---

The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least nine (9) months prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-7-3 and 326 IAC 2-7-4(a).

**B.15 Deviations from Permit Requirements and Conditions [326 IAC 2-7-5(3)(C)(ii)]**

---

- (a) Deviations from any permit requirements (for emergencies see Section B - Emergency Provisions), the probable cause of such deviations, and any response steps or preventive measures taken shall be reported to:

Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251

using the attached Quarterly Deviation and Compliance Monitoring Report, or its equivalent. A deviation required to be reported pursuant to an applicable requirement that exists independent of this permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report.

The Quarterly Deviation and Compliance Monitoring Report does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (b) A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.

**B.16 Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-7-5(6)(C)][326 IAC 2-7-8(a)][326 IAC 2-7-9]**

---

- (a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Part 70 Operating Permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-7-5(6)(C)] The notification by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAQ, determines any of the following:

submitted to:

Indiana Department of Environmental Management  
Permits Branch, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251

Any such application shall be certified by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

B.19 Operational Flexibility [326 IAC 2-7-20][326 IAC 2-7-10.5]

- (a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-7-20(b),(c), or (e) without a prior permit revision, if each of the following conditions is met:

- (1) The changes are not modifications under any provision of Title I of the Clean Air Act;
- (2) Any preconstruction approval required by 326 IAC 2-7-10.5 has been obtained;
- (3) The changes do not result in emissions which exceed the limitations provided in this permit (whether expressed herein as a rate of emissions or in terms of total emissions);
- (4) The Permittee notifies the:

Indiana Department of Environmental Management  
Permits Branch, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251

and

United States Environmental Protection Agency, Region V  
Air and Radiation Division, Regulation Development Branch - Indiana (AR-18J)  
77 West Jackson Boulevard  
Chicago, Illinois 60604-3590

in advance of the change by written notification at least ten (10) days in advance of the proposed change. The Permittee shall attach every such notice to the Permittee's copy of this permit; and

- (5) The Permittee maintains records on-site, on a rolling five (5) year basis, which document all such changes and emission trades that are subject to 326 IAC 2-7-20(b),(c), or (e). The Permittee shall make such records available, upon reasonable request, for public review.

Such records shall consist of all information required to be submitted to IDEM, OAQ in the notices specified in 326 IAC 2-7-20(b)(1), (c)(1), and (e)(2).

permit or applicable requirements; and

- (e) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

**B.22 Transfer of Ownership or Operational Control [326 IAC 2-7-11]**

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- (a) The Permittee must comply with the requirements of 326 IAC 2-7-11 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.
- (b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:

Indiana Department of Environmental Management  
Permits Branch, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251

The application which shall be submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

**B.23 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-7-5(7)][326 IAC 2-1.1-7]**

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- (a) The Permittee shall pay annual fees to IDEM, OAQ, within thirty (30) calendar days of receipt of a billing. Pursuant to 326 IAC 2-7-19(b), if the Permittee does not receive a bill from IDEM, OAQ, the applicable fee is due April 1 of each year.
- (b) Except as provided in 326 IAC 2-7-19(e), failure to pay may result in administrative enforcement action or revocation of this permit.
- (c) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-4230 (ask for OAQ, Billing, Licensing, and Training Section), to determine the appropriate permit fee.

**B.24 Credible Evidence [326 IAC 2-7-5(3)][326 IAC 2-7-6][62 FR 8314] [326 IAC 1-1-6]**

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For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of any condition of this permit, nothing in this permit shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether the Permittee would have been in compliance with the condition of this permit if the appropriate performance or compliance test or procedure had been performed.



C.7 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

- (a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.
- (b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:
  - (1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or
  - (2) If there is a change in the following:
    - (A) Asbestos removal or demolition start date;
    - (B) Removal or demolition contractor; or
    - (C) Waste disposal site.
- (c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).
- (d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

Indiana Department of Environmental Management  
Asbestos Section, Office of Air Quality  
100 North Senate Avenue  
MC 61-52 IGCN 1003  
Indianapolis, Indiana 46204-2251

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (e) **Procedures for Asbestos Emission Control**  
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-1, emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.
- (f) **Demolition and Renovation**  
The Permittee shall thoroughly inspect the affected facility or part of the facility where the demolition or renovation will occur for the presence of asbestos pursuant to 40 CFR 61.145(a).

Indiana Department of Environmental Management  
Compliance Branch, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251

in writing, prior to the end of the initial ninety (90) day compliance schedule, with full justification of the reasons for the inability to meet this date.

The notification which shall be submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Unless otherwise specified in the approval for the new emission unit(s), compliance monitoring for new emission units or emission units added through a source modification shall be implemented when operation begins.

**C.11 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]**

Any monitoring or testing required by Section D of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, 40 CFR 60 Appendix B, 40 CFR 63, or other approved methods as specified in this permit.

**C.12 Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]**

- (a) When required by any condition of this permit, an analog instrument used to measure a parameter related to the operation of an air pollution control device shall have a scale such that the expected maximum reading for the normal range shall be no less than twenty percent (20%) of full scale.
- (b) The Permittee may request that the IDEM, OAQ approve the use of an instrument that does not meet the above specifications provided the Permittee can demonstrate that an alternative instrument specification will adequately ensure compliance with permit conditions requiring the measurement of the parameters.

**Corrective Actions and Response Steps [326 IAC 2-7-5][326 IAC 2-7-6]**

**C.13 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]**

Pursuant to 326 IAC 1-5-2 (Emergency Reduction Plans; Submission):

- (a) The Permittee prepared and submitted written emergency reduction plans (ERPs) consistent with safe operating procedures on February 3, 1999.
- (b) Upon direct notification by IDEM, OAQ that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate episode level.  
[326 IAC 1-5-3]

**C.14 Risk Management Plan [326 IAC 2-7-5(12)] [40 CFR 68]**

If a regulated substance, as defined in 40 CFR 68, is present at a source in more than a threshold quantity, the Permittee must comply with the applicable requirements of 40 CFR 68.

**C.15 Response to Excursions or Exceedances [326 IAC 2-7-5] [326 IAC 2-7-6]**

- (a) Upon detecting an excursion or exceedance, the Permittee shall restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.

**Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

**C.17 Emission Statement [326 IAC 2-7-5(3)(C)(iii)] [326 IAC 2-7-5(7)] [326 IAC 2-7-19(c)] [326 IAC 2-6]**

- (a) Pursuant to 326 IAC 2-6-3(a)(1), the Permittee shall submit by July 1 of each year an emission statement covering the previous calendar year. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4(c) and shall meet the following requirements:

- (1) Indicate estimated actual emissions of all pollutants listed in 326 IAC 2-6-4(a);
- (2) Indicate estimated actual emissions of regulated pollutants as defined by 326 IAC 2-7-1 (32) ("Regulated pollutant, which is used only for purposes of Section 19 of this rule") from the source, for purpose of fee assessment.

The statement must be submitted to:

Indiana Department of Environmental Management  
Technical Support and Modeling Section, Office of Air Quality  
100 North Senate Avenue  
MC 61-50 IGCN 1003  
Indianapolis, Indiana 46204-2251

The emission statement does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (b) The emission statement required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

**C.18 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6]**

- (a) Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.
- (b) Unless otherwise specified in this permit, all record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.

**C.19 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11]**

- (a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported. This report shall be submitted within thirty (30) days of the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

## SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

### Facility Description [326 IAC 2-7-5(15)]:

- (a) One (1) production line with a natural gas fired curing oven, designated as ID A-1 and constructed in 1955, with a maximum rated burner capacity of 1.0 million British thermal units per hour, producing up to 1,630 pounds fiberglass insulation per hour. Particulate emissions are controlled by a gravity settling chamber, a dry prefilter chamber, and a fume thermal oxidizer (12.5 million British thermal units per hour maximum rated capacity) in series, exhausting through stack A.

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

### Emission Limitations and Standards [326 IAC 2-7-5(1)]

#### D.1.1 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the curing oven shall not exceed 3.57 pounds per hour when operating at a process weight rate of 1,630 pounds per hour.

This emission limitation was calculated using the following equation:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

#### D.1.2 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B – Preventive Maintenance Plan, of this permit, is required for oven curing and its control devices.

### Compliance Determination Requirements

#### D.1.3 Particulate

- (a) In order to comply with condition D.1.1 and C.2, the dry prefilter chamber and gravity settling chamber shall be in operation at all times the curing oven is in operation.
- (b) In order to comply with condition D.1.1 and C.2, the thermal oxidizer shall be in operation at all times the curing oven is in operation and a phenol - formaldehyde based binder is being used.

### Compliance Monitoring Requirements [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]

#### D.1.4 Thermal Oxidizer

When using a phenol-formaldehyde based binder:

- (a) A continuous monitoring system shall be calibrated, maintained, and operated on the thermal oxidizer for measuring operating temperature. Continuous monitoring shall mean at least one (1) reading each minute. The output of this system shall be recorded as a three-hour average. The Permittee shall take appropriate response steps in accordance with Section C - Response to Excursions or Exceedances whenever the three-hour average temperature of the thermal oxidizer is below 880°F. A three-hour average temperature that is below 880°F is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances

## **Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

### **D.1.8 Record Keeping Requirements**

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- (a) To document compliance with Condition D.1.4, when using the phenol-formaldehyde binder, the Permittee shall maintain continuous temperature records (on a three-hour average basis) for the thermal oxidizer and the three-hour average temperature used to demonstrate compliance during the most recent compliant stack test
- (b) To document compliance with Condition D.1.5, the Permittee shall maintain records of the once per shift visible emission notations of the cure oven stack exhaust and the ventilation roof stack exhausting the cure oven production line. The Permittee shall include in their once per shift record when a visible emission notation is not taken and the reason for the lack of visible emission notation (i.e. the process did not operate that day).
- (c) To document compliance with Condition D.1.6, the Permittee shall maintain records of the inspections and ductwork cleaning required under Condition D.1.6.
- (d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

## **Compliance Determination Requirements**

### **D.2.4 Particulate**

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The dust cage (dry filter) on the pneumatic conveyor, the dry filters on the matte cooling segment, and the baghouse on the forming chamber, shall be in operation at all times that these units are in operation.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE BRANCH  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251  
Phone: 317-233-0178  
Fax: 317-233-6865**

**PART 70 OPERATING PERMIT  
EMERGENCY OCCURRENCE REPORT**

Source Name: Anco Products, Inc.  
Source Address: 2500 S 17th Street, Elkhart, IN 46517  
Mailing Address: 2500 S 17th Street, Elkhart, IN 46517  
Part 70 Permit No.: T039-17563-00069

**This form consists of 2 pages**

**Page 1 of 2**

- |                          |  |
|--------------------------|--|
| <input type="checkbox"/> | This is an emergency as defined in 326 IAC 2-7-1(12)   |
| X                        | The Permittee must notify the Office of Air Quality (OAQ), within four (4) business hours (1-800-451-6027 or 317-233-0178, ask for Compliance Section); and                    |
| X                        | The Permittee must submit notice in writing or by facsimile within two (2) working days (Facsimile Number: 317-233-6865), and follow the other requirements of 326 IAC 2-7-16. |

If any of the following are not applicable, mark N/A

Facility/Equipment/Operation:
Control Equipment:
Permit Condition or Operation Limitation in Permit:
Description of the Emergency:
Describe the cause of the Emergency:

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE DATA SECTION**

**PART 70 OPERATING PERMIT  
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT**

Source Name: Anco Products, Inc.  
Source Address: 2500 S 17th Street, Elkhart, IN 46517  
Mailing Address: 2500 S 17th Street, Elkhart, IN 46517  
Part 70 Permit No.: T039-17563-00069

Months: \_\_\_\_\_ to \_\_\_\_\_ Year: \_\_\_\_\_

Page 1 of 2

(1) This report shall be submitted quarterly based on a calendar year. Any deviation from the requirements, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. A deviation required to be reported pursuant to an applicable requirement that exists independent of the permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".	
<input type="checkbox"/> NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.	
<input type="checkbox"/> THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD	
Permit Requirement (specify permit condition #)	
Date of Deviation:	Duration of Deviation:
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	Duration of Deviation:
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	



**Indiana Department of Environmental Management  
Office of Air Quality**

**Technical Support Document (TSD) for a Part 70  
Significant Permit Modification**

**Source Description and Location**

Source Name:	Anco Products, Inc.
Source Location:	2500 S 17th Street, Elkhart, IN 46517
County:	Elkhart
SIC Code:	3296 and 3444
Operation Permit No.:	T 039-17563-00069
Operation Permit Issuance Date:	June 21, 2007
Significant Permit Modification No.:	039-28476-00069
Permit Reviewer:	Madhurima D. Moulik

**Existing Approvals**

The source was issued Part 70 Operating Permit (1st Renewal) No. T 039-17563-00069 on June 21, 2007.

**County Attainment Status**

The source is located in Elkhart County.

Pollutant	Designation
SO <sub>2</sub>	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O <sub>3</sub>	Attainment effective July 19, 2007, for the 8-hour ozone standard. <sup>1</sup>
PM <sub>10</sub>	Unclassifiable effective November 15, 1990.
NO <sub>2</sub>	Cannot be classified or better than national standards.
Pb	Not designated.
<sup>1</sup> Attainment effective October 18, 2000, for the 1-hour ozone standard for the South Bend-Elkhart area, including Elkhart County, and is a maintenance area for the 1-hour National Ambient Air Quality Standards (NAAQS) for purposes of 40 CFR 51, Subpart X*. The 1-hour standard was revoked effective June 15, 2005. Unclassifiable or attainment effective April 5, 2005, for PM2.5.	

Note: On October 25, 2006, the Indiana Air Pollution Control Board finalized a rule revision to 326 IAC 1-4-1 revoking the one-hour ozone standard in Indiana.

(a) Ozone Standards

- (1) On October 25, 2006, the Indiana Air Pollution Control Board finalized a rule revision to 326 IAC 1-4-1 revoking the one-hour ozone standard in Indiana.
- (2) On September 6, 2007, the Indiana Air Pollution Control Board finalized a temporary emergency rule to re-designate Allen, Clark, Elkhart, Floyd, LaPorte, and St. Joseph counties as attainment for the 8-hour ozone standard.
- (3) On November 9, 2007, the Indiana Air Pollution Control Board finalized a temporary emergency rule to re-designate Boone, Hamilton, Hancock, Hendricks, Johnson, Madison, Marion, Morgan and Shelby counties as attainment for the 8-

### Permit Level Determination – Part 70

The modification will be incorporated into the Part 70 Operating Permit through a significant permit modification issued pursuant to 326 IAC 2-7-12, as the modification involves significant changes in the permit terms and conditions.

### Federal Rule Applicability Determination

There are no changes to federal rule applicabilities.

### State Rule Applicability Determination

There are no changes to the state rule applicabilities.

### Compliance Determination and Monitoring Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with all applicable state and federal rules on a continuous basis. All state and federal rules contain compliance provisions; however, these provisions do not always fulfill the requirement for a continuous demonstration. When this occurs, IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, Compliance Determination Requirements are included in the permit. The Compliance Determination Requirements in Section D of the permit are those conditions that are found directly within state and federal rules and the violation of which serves as grounds for enforcement action.

If the Compliance Determination Requirements are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also in Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

The changes to the compliance requirements are included in the "Proposed Changes" section below.

### Proposed Changes

The changes listed below have been made to Part 70 Operating Permit No. 039-17563-00069. Deleted language appears as ~~strikethroughs~~ and new language appears in **bold**:

1. The facility descriptions in Section A.2 and D.1 have been modified, since the Permittee plans to use the curing oven to process non-phenolic binders. All references to "phenolic" when describing the curing oven have been deleted from permit conditions.
2. Condition D.1.3 - Particulate has been modified as requested by the Permittee and approved by IDEM's Air Compliance and Enforcement Manager. In the modified condition, the thermal oxidizer controlling particulates and opacity from the curing oven will be required to be in operation only when a phenol-formaldehyde based binder is being used, since inspection by IDEM confirmed that there are no particulate emissions and opacity issues (when bypassing the thermal oxidizer) with a non-phenolic binder.
3. After internal review and as approved by IDEM's Air Compliance and Enforcement Branch, the PM and VOC testing requirements under Condition D.1.4 have been deleted.

**D.1.2 Preventive Maintenance Plan [326 IAC 2-7-5(13)]**

A Preventive Maintenance Plan, in accordance with Section B – Preventive Maintenance Plan, of this permit, is required for phenolic oven curing and its control devices.

**D.1.3 Particulate**

- (a) In order to comply with condition D.1.1 and C.2, the dry prefilter chamber, and gravity settling chamber and thermal oxidizer shall be in operation at all times the phenolic curing oven is in operation.
- (b) In order to comply with condition D.1.1 and C.2, the thermal oxidizer shall be in operation at all times the curing oven is in operation and a phenol - formaldehyde based binder is being used.

**D.1.4 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]**

Within one hundred and eighty (180) days after permit issuance, the Permittee shall conduct performance testing to

- (a) Establish the fume thermal oxidizer system particulate capture and control efficiency, and determine compliance with the respective particulate and opacity limitations per conditions D.1.1 and C.2. The particulate testing shall be conducted for PM and PM-10 utilizing methods as approved by the Commissioner. PM-10 includes filterable and condensable PM-10.
- (b) Determine the uncontrolled total volatile organic compound (VOC) emission rate from the phenolic curing oven.

Testing shall be conducted in accordance with Section C – Performance Testing.

**D.1.5 D.1.4 Thermal Oxidizer**

**When using a phenol-formaldehyde based binder:**

- (a) A continuous monitoring system shall be calibrated, maintained, and operated on the thermal oxidizer for measuring operating temperature. Continuous monitoring shall mean at least one (1) reading each minute. The output of this system shall be recorded as a three-hour average. From the date of issuance of this permit until the approved stack test results are available, the Permittee shall take appropriate response steps in accordance with Section C - Response to Excursions or Exceedances whenever the three-hour average temperature of the thermal oxidizer is below 880°F. A three-hour average temperature that is below 880°F is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.
- (b) The Permittee shall determine the three-hour average temperature from the most recent valid stack test that demonstrates compliance with limits in conditions D.1.1 and C.2, as approved by IDEM.
- (c) (b) On and after the date the approved stack test results are available, the Permittee shall take appropriate response steps in accordance with Section C - Response to Excursions or Exceedances whenever the three-hour average temperature of the thermal oxidizer is below 880 deg F the three-hour average temperature as observed during the compliant stack test. A three-hour average temperature that is below 880 deg F the three-hour average temperature as observed during the compliant stack test is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

**D.1.6 D.1.5 Visible Emissions Notations**

- (a) Visible emission notations of the phenolic curing oven thermal oxidizer stack exhaust (stack ID A) and the ventilation roof stack exhausting the phenolic cure oven production

<b>Conclusion and Recommendation</b>
--------------------------------------

This proposed modification shall be subject to the conditions of the attached proposed Part 70 Significant Permit Modification No. 039-28476-00069. The staff recommends to the Commissioner that this Part 70 Significant Permit Modification be approved.





# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

*We Protect Hoosiers and Our Environment.*

*Mitchell E. Daniels, Jr.*  
Governor

*Thomas W. Easterly*  
Commissioner

100 North Senate Avenue  
Indianapolis, Indiana 46204  
(317) 232-8603  
Toll Free (800) 451-6027  
[www.idem.IN.gov](http://www.idem.IN.gov)

December 7, 2009

65-42 WQS/RJB  
Leah Thwig  
Anco Products Inc.  
2500 SOUTH 17TH STREET  
Elkhart, IN 46517

Re: No Exposure Exclusion  
Anco Products Inc., Elkhart  
Permit # INR210222

Dear Ms Thwig:

The Indiana Department of Environmental Management (IDEM) has received your facility's Conditional No Exposure Exclusion Certification pursuant to 327 IAC 15-6-12. By submitting this application your facility is certifying to IDEM there are no materials or operations exposed to storm water.

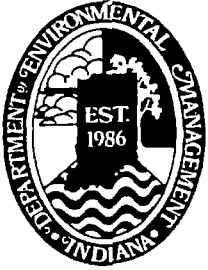
In order for a no exposure exclusion from NPDES Industrial Storm Water permitting to remain applicable a facility must maintain a condition of no exposure. Failure to maintain the condition of no exposure may lead to the unauthorized discharge of pollutants to waters of the state and IDEM is authorized to conduct inspections to confirm the condition of No Exposure.

Be aware that if any industrial activities or materials are or will be exposed to precipitation, the facility is not eligible for the conditional no exposure exclusion and must obtain coverage prior to exposure. Facilities must renew their exclusion by resubmitting a Conditional No Exposure Certification form prior to the five (5) year anniversary date, 11/02/2014.

If you have questions, please refer to our website, <http://www.in.gov/idem/4901.htm>, or contact Megan Nagle, Storm Water Specialist, at 317-234-5029 or by e-mail at [mnagle@idem.in.gov](mailto:mnagle@idem.in.gov).

Sincerely,

Randy J. Braun, CPESC  
Storm Water Program Manager  
Office of Water Quality



# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

*We make Indiana a cleaner, healthier place to live*

*Evan Bayh*  
Governor

*Michael O'Connor*  
Commissioner

100 North Senate Avenue  
P.O. Box 6015  
Indianapolis, Indiana 46206-6015  
Telephone 317-232-8603  
Environmental Helpline 1-800-451-6027

January 14, 1997

VIA CERTIFIED MAIL P 451 356 765

ANCO PRODUCTS, INC.  
2500 SOUTH 17TH STREET  
ELKHART, IN 46517

Dear Facility:

NPDES Permit No.: INR00A037  
Facility Type: STORMWATER  
Re: Annual NPDES Permit Fee  
Assessment

Please find enclosed the 1997 annual NPDES permit fee assessment for your facility. The fees for your facility are due on 03/15/1997. It is important to note that payment of fees must be received by the Department of Environmental Management by the due date, or a delinquency charge or other penalty under IC 13-18-20 will be imposed. Along with the assessment, the fee packet includes some or all of the following information depending on your facility type:

- Fee assessment invoice
- Installment payment coupons
- A pre-signed claim form
- How to Reduce Flow Rates at Wastewater Treatment Plants
- Important Information for Permittees
- Important Facts Concerning the Calculation of Annual Flow Fees
- Pertinent sections of IC 13-18-20, which includes fee schedules
- Questions & Answers About Permit Fees
- Custom Connect and FaxBack information

Please notice a change made to the invoice this year. According to I.C. 13-22-12-14, which was passed this year by the legislature, IDEM now offers the alternative of installment payments for those facilities that determine a single payment places undue hardship on them. Facilities should notify IDEM in writing that they feel such hardship with the payment due. Each facility may either pay the 1997 annual assessment fee in entirety by the due date, or pay the assessment in four equal, quarterly installments. Please check the appropriate box on the invoice if you desire to pay in installments, and note the amount due (which is the total fee divided by four). IDEM will **not** be sending separate assessments for each installment, so it will be your responsibility to check the due dates on the attached payment coupons and make appropriate payments. One payment coupon should be included with EACH installment payment. They provide documentation of your facility permit number and the address to which you should send your payment. IDEM will assess late penalties (equal to 10% of the installment total) on each installment that is not received by IDEM within 30 days after the due date.

Your permit fees will provide money for permitting and directly associated activities of the NPDES program. During the coming year, the Indiana Department of Environmental Management (IDEM) will continue to provide educational and technical assistance to Indiana businesses. Enclosed is information on two helpful IDEM services: Custom Connect and FaxBack. These services enable you to access IDEM information -- night or day. By working together, both the regulated community and IDEM can make Indiana a cleaner, healthier place to live.

If you have any questions regarding your fee assessment, please contact Laurie Maudlin at 317/233-0569. Due to the high volume of telephone inquiries received during the billing period, it may be necessary for you to leave a voicemail message. If you do so, please include your permit number with your message.

Sincerely,

A handwritten signature in black ink, appearing to read "R. J. Henley". The signature is fluid and cursive, with the first name "R." and last name "Henley" clearly distinguishable.

R. J. Henley  
Assistant Commissioner  
Office of Water Management

Enclosures



# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

Controller's Dept., Attention: Cashier, 100 N. Senate Ave., P.O. Box 7060, Room 1324, Indianapolis, IN 46207-7060

## 1997 ANNUAL NPDES PERMIT FEE ASSESSMENT

DATE:	01/14/1997	INVOICE NO.:	9700032
		REVENUE CODE:	2830-433600-100600
PERMIT NO.:	INR00A037		
FACILITY TYPE:	STORMWATER	FLOW (in MGD):	
		# OF OUTFALLS:	
MAILING ADDRESS:		BASE FEE:	\$100.00
		ADDITIONAL FEE*:	\$.00
		DISCOUNT:	-\$0.00
		1997 CREDIT:	-\$0.00
		AMOUNT DUE:	\$100.00

ANCO PRODUCTS, INC.  
2500 SOUTH 17TH STREET  
ELKHART, IN 46517

NOTE: IF YOU HAVE ALREADY PAID YOUR 1997 NPDES  
PERMIT FEE, PLEASE DISREGARD THIS NOTICE.

\*Additional fees are based upon flow, # of  
outfalls, or # of pipes.

DATE PAYMENT DUE: 03/15/1997

PLEASE KEEP TOP PORTION FOR YOUR RECORDS

----- IMPORTANT: PLEASE RETURN BOTTOM PORTION WITH YOUR PAYMENT -----

REMIT PAYMENT TO: IDEM  
Controller's Dept.  
Attention: Cashier  
100 N. Senate Ave.  
P.O. Box 7060, Room 1324  
Indianapolis, IN 46207-7060

DATE: 01/14/1997

*Pay in FEB 97*

## 1997 ANNUAL NPDES PERMIT FEE ASSESSMENT

PERMIT NO.:	INR00A037	INVOICE NO.:	9700032
FACILITY TYPE:	STORMWATER	REVENUE CODE:	2830-433600-100600
MAILING ADDRESS:			
		AMOUNT DUE:	\$100.00
		DATE PAYMENT DUE:	03/15/1997

ANCO PRODUCTS, INC.  
2500 SOUTH 17TH STREET  
ELKHART, IN 46517

☐ Check here if you would like to pay your 1997 annual fee assessment in equal, quarterly installments. Please consult the attached payment coupons for due dates. Your quarterly payment due will be \$25.

ADDRESS CORRECTION: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



P.O. BOX 233 • OSCEOLA, IN 46561 • PHONE: (219) 259-4138

---

May 13, 1994

Mr. Gary Luft  
Anco Products, Inc.  
2500 South 17th Street  
Elkhart, Indiana 46517

Dear Gary:

Enclosed you will find an "update" letter sent to the Indiana Department of Environmental Management (IDEM) concerning Anco Products, Inc.'s Storm Water Pollution Prevention Plan. These letters let the IDEM know that Anco Products, Inc. is complying with the Storm Water Permit Rule.

The letter should be kept on file along with the Pollution Prevention Plan specifically written for Anco Products, Inc.

The scheduling for 1994's storm water sampling is for late spring, depending on the weather.

If you have any questions, please feel free to contact me at the Industrial Safety and Environmental Services office.

Very Truly Yours,

Dana Simpson  
Industrial Safety and Environmental Services

**I**NDUSTRIAL  
**S**AFETY AND  
**E**NVIRONMENTAL  
**S**ERVICES

P.O. BOX 233 • OSCEOLA, IN 46561 • PHONE: (219) 259-4138

---

May 13, 1994

Ms. Laura Bieberich  
Storm Water Coordinator  
Office of Water Management  
Indiana Department of Environmental Management  
105 South Meridian Street  
Indianapolis, Indiana

Dear Ms. Bieberich:

The purpose of this letter is to inform you of the work completed on the Stormwater Pollution Prevention Plan for Anco Products, Inc. (Anco), 2500 South 17th Street, Elkhart, Indiana, NPDES general permit number 00A037, as of May 13, 1994.

Please be advised of the following:

On June 28, 1993, storm water sampling was conducted at the Anco facility. The storm water samples consist of eight (8) parameters specified in the Stormwater Pollution Prevention Plan Workbook distributed by the Indiana Department of Environmental Management (IDEM).

On October 18, 1993, the Stormwater Pollution Prevention Plan was completed for Anco. A copy of the Stormwater Pollution Prevention Plan is retained on site at the facility.

The dates of implementation concerning the Best Management Practices (BMPs), planting new vegetation near erosion areas and inspecting those areas continuously, have been documented in the Stormwater Pollution Prevention Plan and will be implemented by the appropriate dates.

Completion of the training program for Anco is also at this time being developed for future use.

Storm water sampling is scheduled for late spring at the Anco facility.

I trust that the information provided will give you a better understanding of what has been accomplished thus far. If there are any questions as to the Stormwater Pollution Prevention Plan for Anco, please feel free to contact me at your convenience.

Very Truly Yours,

A handwritten signature in cursive script that reads "Dana Simpson". The signature is written in dark ink and is positioned above the printed name.

Dana Simpson  
Industrial Safety and Environmental Services

cc: Mr. Gary Luft -- Anco Products, Inc.

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**E**NVIRONMENTAL  
**S**ERVICES

P.O. BOX 233 • OSCEOLA, IN 46561 • PHONE: (219) 259-4138

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January 4, 1995

Gary Luft  
Anco Products, Inc.  
2500 South 17th Street  
Elkhart, Indiana 46517

Dear Mr. Luft:

The purpose of this letter is to inform you of the status of the Anco stormwater Pollution Prevention Plan (PPP). There are a few more requirements to fulfill before the issue can be considered closed.

Stormwater sampling was performed at your facility on July 7, 1994. Analysis results from that sampling are enclosed with this letter. One further sample needs to be taken in order to comply with 327 IAC 15: NPDES General Permit Rule Program.

Four visual inspections of stormwater are also required. Two of these inspections must take place in 1995 and the other two in 1997. These inspections require visual characterization of stormwater turbidity, color, foam, solids, floatables, and oil sheen.

Please remember that the PPP for Anco must be updated every time there is modification to the path, quality or character of the stormwater on the property. This is a requirement of the state code which must be followed in order to maintain compliance.

I have enclosed the annual progress letter that was sent to Laura Bieberich, Stormwater Coordinator, IDEM. An annual update letter must be sent to the state every year that stormwater sampling or visual inspections take place.

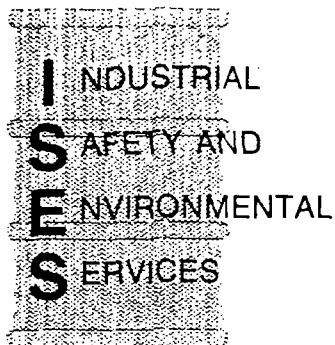
I will be contacting you during the spring to inform you of stormwater sampling and visual inspections that should occur. If you have any questions regarding the letter to Ms. Bieberich, or the sampling and visual inspection requirements, please feel free to contact me at your convenience.

Very Truly Yours,

A handwritten signature in black ink, appearing to read "Nathan Bair", with a stylized flourish at the end.

Nathan Bair  
Consulting Engineer  
Industrial Safety and Environmental Services

Enclosures: 2as



P.O. BOX 233 • OSCEOLA, IN 46561 • PHONE: (219) 259-4138

---

January 4, 1995

Laura Bieberich  
Indiana Department of Environmental Management  
100 North Senate Avenue  
Indianapolis, Indiana 46206

Dear Ms. Bieberich:

The purpose of this letter is to report to you the stormwater sampling performed at Anco Products, Inc. Elkhart, Indiana. Industrial Safety and Environmental Services (ISES) was retained to assist Anco Products with the creation of their Pollution Prevention Plan (PPP) and stormwater sampling.

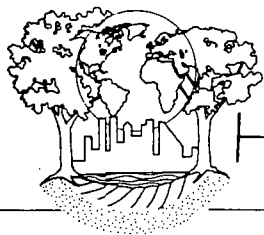
Initial Sampling took place on July 7, 1993. A stormwater sample was taken on July 6, 1994. The results of the analysis performed on those samples are enclosed with this letter. Another sample will be taken in the spring of 1995 to complete the physical stormwater sampling requirements. Visual inspection of stormwater will occur for two precipitation events in 1995 and 1997. Annual reports will be made to your office for every year that sampling or visual inspections take place.

The updating of the Anco PPP, stormwater sampling, and visual inspections are intended to maintain Anco Products' compliance with 327 IAC 15: NPDES General Permit Rule Program. If you have any questions regarding the results of the stormwater sampling, please feel free to contact me at your convenience.

Very Truly Yours,

Nathan Bair  
Consulting Engineer  
Industrial Safety and Environmental Services

cc: Mr. Gary Luft      Anco Products, Inc.



# Environmental Health Laboratories

110 S. Hill Street  
South Bend, IN 46617  
(219) 233-4777  
(219) 233-3272  
FAX (219) 233-8207

## LABORATORY REPORT

Client: Industrial Safety & Environmental Services  
Attn: Nathan Bair  
716 Lincolnway West  
Osceola, IN 46561

Report#: 120744-58(44-51)

Priority: Standard Written

Status: Final

Project/Site: ANCO / Stormwater (Front Prop.)

Samples Submitted: Eight Stormwater Samples

Copies to: None

Collected: 07-06-94

By: Client

Received: 07-07-94

## REPORT RESULTS

Eight samples were submitted for BOD, COD, Nitrogen (Kjeldahl), Oil & Grease, Total Phosphorus, Total Suspended Solids (TSS), Nitrate-Nitrite, and Nitrite analysis. Quantitative results are presented below. Results of all associated quality control samples were within acceptance limits. No project specific quality control was requested.

### GENERAL CHEMISTRY--Stormwater

Parameter	Method	PQL		Results
BOD	EPA-405.1	10	√ <	10 mg/L
COD	EPA-410.1	2.0		58 mg/L
Nitrogen (Kjeldahl)	EPA-351.4	0.5		2.6 mg/L
Oil & Grease, Total	EPA-413.1	1.0		6.0 mg/L
Phosphorus, Total	EPA-365.2	0.1		0.3 mg/L
Suspended Solids, Total	EPA-160.2	4.0	<	4.0 mg/L
Nitrogen, Nitrate-Nitrite	EPA-353.2	0.02		1.3 mg/L
Nitrogen, Nitrite	EPA-353.2	0.01		0.06 mg/L

If dilutions were required for quantitation of specific parameters, they are indicated by a (√) preceeding the result.

Analyzed: 07-08 to 07-18-94

Analyst: PC/ JV/ WJ & Ref. Lab(Edglo)

Continued on the following page



Client: Industrial Safety & Environmental Services

Report#: 120744-58(44-51)

We appreciate the opportunity to provide you with this analysis. If you have any questions concerning this report, please do not hesitate to call us at (219) 233-4777.

REVIEWED BY:

Paul J. Davis

DATE:

8-4-94

FINALIZED BY:

John E. George III

DATE:

8/5/94

## REFERENCES AND DEFINITIONS OF TERMS

### General Chemistry

#### References:

1. EPA-600/4-79-020  
Methods for Chemical Analysis of Water and Wastes
2. Standard Methods For the Examination of Water and Wastewater  
Vol. 17, 1989
3. Standard Method of Test for Nitrate Using an Ion Selective Electrode  
Orion WeWWG/5880
4. EPA Test Methods for Evaluating Solid Waste  
SW-846, Third Edition, November 1986

**Practical Quantitation Limits (PQL's)** represent the lower limit at which the compounds of interest can be accurately measured, at a 95% confidence level, and reported for a sample exhibiting minimal chemical background interference under the conditions employed in the analytical procedure. PQL's are by definition a function of the instrument performance for an ideal sample and thus are not adjusted for sample dilutions used to calculate results.

**Results:** Values presented in the result column represent the lowest reportable value for a parameter after correcting for all sample dilutions.

**1 mg/L** = 1 milligram per liter = 1 part per million (ppm).

**< = "less than."** This number is the lowest reportable value by the procedure used for analysis after factoring in all dilutions.

Industrial Safety and Environmental  
P.O. Box 233  
1415 Lincolnway West-Suite E  
Osceola, IN 46561  
ATTN: Nathan Bair



HEADQUARTERS/LABORATORY  
705 FRONT STREET  
TOLEDO, OHIO 43605  
PHONE: (419) 693-5307  
FAX: (419) 691-0418

ENVIRONMENTAL LABORATORY  
1632 ENTERPRISE PARKWAY  
TWINSBURG, OHIO 44087  
PHONE: (216) 425-8200  
FAX: (216) 425-1349

lab no.
97T03157
p.o. no.

rev: 0

SAMPLE

DESCRIPTION: Project Name - ANCO - Grab 1-5 - Sample Date 03/25/97 @ 10:05

RESULTS:

<u>ANALYTE</u>	<u>METHOD</u>	<u>RESULT</u>
pH in S. U.	EPA-600, 150.1	4.58
Total Oil & Grease	EPA-600, 413.2	0.66 mg/L
Total Suspended Solids	EPA-600, 160.2	44 mg/L
Kjeldahl Nitrogen as N	EPA-600, 351.3	Less than 0.15 mg/L
Nitrate - Nitrite as N	EPA-600, 353.3	0.61 mg/L
Total Phosphorus as P	EPA-600, 365.2	Less than 0.10 mg/L
BOD <sub>5</sub>	EPA-600, 405.1	14 mg/L
COD	EPA-600, 410.1	170 mg/L

date completed.  
04/07/97

tech:  
LMV/EG/CSY/GJB

approved by:

*Nathan Bair*

Industrial Safety and Environmental  
P.O. Box 233  
1415 Lincolnway West-Suite E  
Osceola, IN 46561  
ATTN: Nathan Bair



HEADQUARTERS/LABORATORY  
705 FRONT STREET  
TOLEDO, OHIO 43605  
PHONE: (419) 693-5307  
FAX: (419) 691-0418

ENVIRONMENTAL LABORATORY  
1632 ENTERPRISE PARKWAY  
TWINSBURG, OHIO 44087  
PHONE: (216) 425-8200  
FAX: (216) 425-1349

lab no.
97T03158
p.o. no.

rev: 0

SAMPLE

DESCRIPTION: Project Name - ANCO - Composite 1-4 - Sample Date 03/25/97 @ 10:05

RESULTS:

<u>ANALYTE</u>	<u>METHOD</u>	<u>RESULT</u>
pH in S. U.	EPA-600, 150.1	6.69
Total Suspended Solids	EPA-600, 160.2	160 mg/L
Kjeldahl Nitrogen as N	EPA-600, 351.3	Less than 0.15 mg/L
Nitrate - Nitrite as N	EPA-600, 353.3	1.6 mg/L
Total Phosphorus as P	EPA-600, 365.2	Less than 0.10 mg/L
BOD <sub>5</sub>	EPA-600, 405.1	10 mg/L
COD	EPA-600, 410.1	150 mg/L

date completed:  
04/07/97

tech.  
LMV/FG/CSY/GJB

approved by:



TANK ASSESSMENT  
ANCO PRODUCTS  
2500 S. 17TH STREET  
ELKHART, INDIANA

# John C. Wallace, Inc.

*Environmental Consultant*  
1215 Whitehall Drive  
South Bend, Indiana 46615  

---

Telephone 219-233-7141

February 20, 1991

Mr. Mark Billington  
Indiana Department of Environmental Management  
Underground Storage Tank Division  
2321 Executive Drive  
Indianapolis, Indiana 46241

RE: UST Closure  
Anco Products Corporation  
2500 17th Street  
Elkhart, Indiana

Dear Mr. Billington:

This letter/report is intended to clarify the work completed, as well as the work still in progress, at the above mentioned site. There has been continual correspondence with your office during work proceedings, beginning with Registration and Intent To Close documents dated; September 12, 1989.

## BACKGROUND:

The position of the USTs for the site is under a portion of the facility. These tanks were discovered during a site assessment conducted for business purposes unrelated to the purpose of this writing. Four monitor wells were installed as part of the investigation for the business related site assessment (figure 01).

The tanks are constructed of stainless steel and are entombed in a cement (secondary) containment. At this time it is not known as to whether or not the cement containment extends beyond the building.

## GROUNDWATER:

Inferred Groundwater flow was established by using Department of National Resources Document; St. Joseph River Basin Water Resource Assessment 87-1, and work performed by ENSR of Boston Massachusetts.

The monitor wells were installed by Cook Well Drilling Company of Niles, Michigan, June 7, 1989. A gasoline powered rotary drill was used. The apparatus for installation of wells and soil identifications consisted of a hollow stem flight auger and a split spoon sampling devise.

Monitor well construction consists of 2" pvc tubing (non glue assembly). The wells have been seated at approximate depth of 22'-23'. A ten foot section of screen was installed at 12', or at a level that would allow for the screen to straddle the

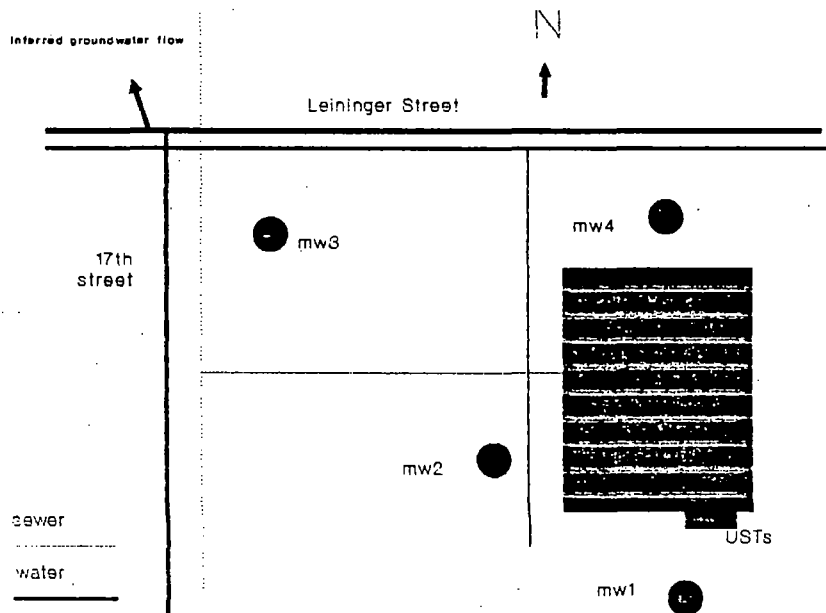
approximate depth that groundwater was first detected. Soil conditions have been described in the well logs (Exhibit C).

#### UNDERGROUND STORAGE TANKS:

Products found in the tanks contained regulated substances; acetone and toluene. June 14, 1989 water samples were drawn from each monitor well. Before samples were taken, three columns of water were removed from each well. Sample results did not indicate the presence of acetone or toluene in the groundwater (Exhibit B).

Figure 01

USTs located at the south end of the facility and directly north of Monitor Well 1 (mw1).



October 13, 1989 the tanks were cleaned and neutralized by K&D Industrial Services, Kalamazoo, Michigan. Waste materials were transported by K&D to Petro Chem of Detroit, Michigan for disposal. An inspection of the interior of the tanks did not reveal any leaks, pinholes or cracks. The tanks are presumed to be in sound condition.

#### AGENCY CORRESPONDENCE:

It was decided that the tanks would be closed in place so as not to undermine the facility structure. This procedure and the position of the tanks would not allow for samples to be



taken in the three (3) areas described by the IDEM (two from the floor at both ends, and one from the sidewall). Ms. Karla McDonald of the IDEM was contacted and informed of this decision.

Ms. Karla McDonald and Ms. Anne Black from the IDEM informed CHES Consultants and Anco Products that the appropriate means of closure for the tanks would be temporary, until a document describing procedures for tank related site assessments was released by the IDEM. A request for this document was given in writing December 18, 1989. As of February 11, 1991, said document has not been received.

#### CURRENT WORK:

December 11, 1990 the monitor wells were accessed to determine groundwater level. A significant rise in water was detected. Groundwater was first encountered at a depth of @ 12', a difference of about two (2) feet from the levels detected during well installation (June 7, 1989).

January 24, 1991 samples were drawn from monitor wells; mw1, mw2 and mw3 (due to the amount of snow covering, mw4 was not sampled). Before samples were taken, three columns of water were removed from each well. Sample results do not indicate the presence of compounds; toluene and acetone (Exhibit A).

#### PROPOSED WORK:

March 5, 1991 is the scheduled date for excavation to begin. Mr. Steve Gatman from the Concord Township Fire Chiefs office has been informed of the intended proceedings

It is possible, that the USTs can be totally removed and sampling can be achieved in the appropriate manner (2 samples from the floor at both ends, and one sample from the sidewall). In the event that it is decided during the excavation that total removal of the USTs would seriously undermine the structure, all or a portion of the USTs will have to remain. Sampling would then be achieved by cutting holes through the floor of the USTs. Closure of the tanks would then be achieved by closure in place and sand fill material would be used.

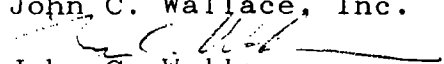
Sample analysis will be conducted by Dihydro Analytical Services, 4455 Fletcher, Wayne, Michigan. Parameter for analysis will be performed in the described manner (TPH; GCFID).

CLOSING:

Closure documents will be prepared and then submitted to your office.

Thank you for your time and consideration in this matter. If there are any questions regarding the information contained herein, please do not hesitate to contact my office at your earliest convenience.

Very truly yours,  
John C. Wallace, Inc.

  
John C. Wallace

Exhibits:

- A. Monitor Well Sampling Results; January 24, 1991
- B. Monitor Well Sampling Results; June 14, 1989
- C. Well Logs
- D. Groundwater Information

EXHIBIT A

SAMPLE RESULTS 1-24-91

## DIHYDRO ANALYTICAL REPORT

CLIENT: John C. Wallace, Inc.

REPORT#: L-91-01-148

SAMPLING SITE: Anco Tank Assessment

SAMPLING DATE: 1-24-91

MATRIX: Water

<u>SAMPLE DESCRIPTION</u>	<u>ACETONE</u>	<u>TOLUENE</u>
Anco-1A, MW-1	<10	<0.2
Anco-2A, MW-2	<10	<0.2
Anco-3A, MW-3	<10	<0.2

All results are expressed as  $\mu\text{g/l}$  (ppb) .



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Fred Holtash  
Director of Environmental Services



EXHIBIT B

SAMPLE RESULTS 6-14-89

## DIHYDRO ANALYTICAL REPORT

CLIENT: C.H.E.S. Consultants, Inc.

REPORT#: L-89-06-86

SAMPLING DATE: 6-14-89

SAMPLING SITE(S): Anco Products

PARAMETERSRESULTS

<i>Matrix:</i> Sample(s) Description:	<i>Water</i>			
	AW-1	AW-2	AW-3	AW-4
Acetone	<0.2	<0.2	<0.2	<0.2
Toluene	<0.0004	<0.0004	<0.0004	<0.0004
Phenols	<0.1	<0.1	<0.1	<0.1

All results are expressed as mg/l (ppm) except as noted.



---

Fred Hoitash  
Director of Environmental Services

## DIHYDRO ANALYTICAL SERVICES

Dihydro Analytical Services, 4541 Fletcher, Wayne, MI, (313) 595-0335

# EXHIBIT C

WELL LOGS

# wellpoint installation

Project AWCO WELLS Job No. \_\_\_\_\_  
 Location AWCO Products Date 6/7/89 Boring No. \_\_\_\_\_

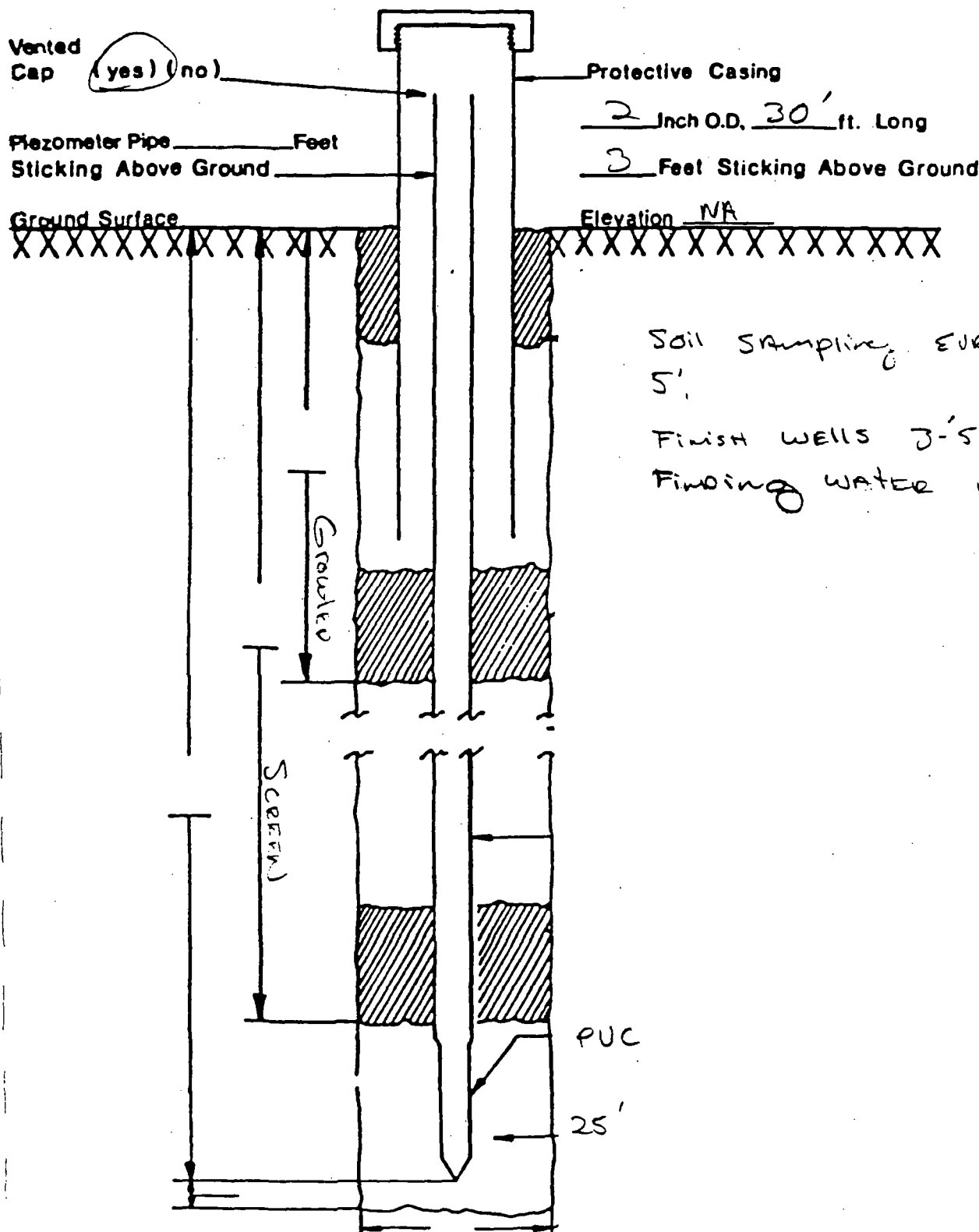




EXHIBIT C  
2410 Weaver Rd.  
Niles, MI 49120  
616-684-6269

SURFACE ELEVATION \_\_\_\_\_ WATER DEPTH ● COMPLETION 243 AFTER 24 HRS. \_\_\_\_\_

LOGGED BY Alan Martindale

LOGGED BY Don Mantel

SHEET 3 OF 4

PROJECT ANCO LOCATION GLIKHMET Ind

JOB NO. Arco DATE COMPLETED June 7 89 WEATHER Sunny HOT

SURFACE ELEVATION \_\_\_\_\_ WATER DEPTH ● COMPLETION 124.0 AFTER 24 HRS. \_\_\_\_\_

## FIELD BORING LOG

[illegible]

REG NO. 211125

LOGGED BY Rob. Martin

BORING NO. Well #4

SHEET 4 OF 4

PROJECT ANCO LOCATION ELKHART Ind

JOB NO. AWCO DATE COMPLETED June 7 85 WEATHER Sunny HOT!

SURFACE ELEVATION \_\_\_\_\_ WATER DEPTH • COMPLETION 138. AFTER 24 HRS. \_\_\_\_\_

## FIELD BORING LOG

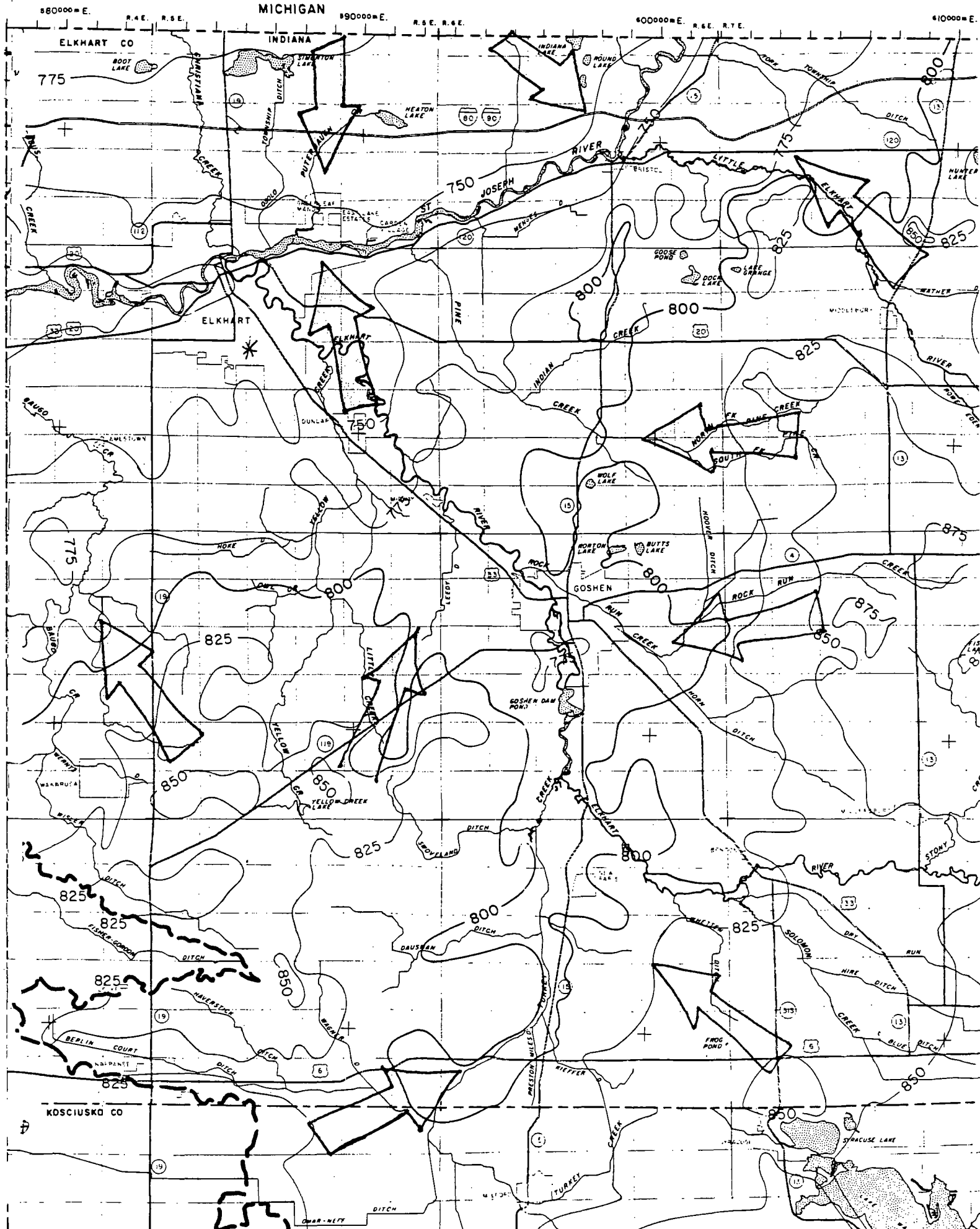
[illegible]

FIG NO. 682-75

LOGGED BY Alan Martindale

## EXHIBIT D

GROUNDWATER INFORMATION



## APPENDIX B - GROUND-WATER FLOW AND TRANSPORT MODEL

### 1.0 Model Application

The most extensive application of this model was for the screening and preliminary design of the remedial alternatives. Modeling enables a more precise design of remedial alternatives to aid in predicting the cost estimates. For example, it will be possible to simulate numerous alternatives for treatment by pumping, enabling evaluation of combinations of pumping parameters that will most effectively reduce or remove contamination. Plume behavior under no action and source-control remedial alternatives was also simulated.

The results of this portion of the modeling will be discussed in the Remedial Action Evaluation, which is to be submitted to the EPA on November 15, 1988.

#### 1.1 Analysis of Contaminant Transport

The model has been used to test and add detail to the preliminary, qualitative assessment of contaminant transport in the Site Area - to change apparent contaminant sources and flow systems into definitive ones. Modeling made possible the simulation of ground-water flow and transport to a relatively detailed field of measured hydraulic conductivity and gradient values. Most significantly, the modeling of contaminant transport has shown which contaminant plumes appear to be attributable to the Site, and which do not.

#### 1.2 Model Selection

Selection of a mathematical model for a particular study primarily involves consideration of study objectives and the complexity of the study area. The model study objectives consist of analysis of contaminant transport, determination of

potential exposure concentrations for the hazard evaluation and the evaluation of various alternatives for ground-water remediation. These objectives dictate the need for a contaminant-transport model that can simulate ground-water flow and contaminant concentrations, both with and without the effects of pumping. In order to explore various pumping and/or reinjection scenarios, the model should also have the capability to simulate the effects of ground-water pumping into and out of the aquifer (positive and negative fluxes) at various locations.

Due to the complexity of the Site Area, a fully three dimensional model is needed which can account for the presence of an intermittent clay layer as well as variations in hydraulic conductivity, layer elevations and thicknesses and other hydraulic properties. The model selected was a three-dimensional numerical contaminant-transport model developed at Princeton University (Babu et al. 1987).

### 1.3 Model Description

The model has two parts, the ground-water flow portion and the contaminant-transport portion which are performed in phases. The first phase only evaluates the ground-water flow and outputs the steady-state water elevations. These steady-state elevations are then used by the model to calculate the ground-water velocity field for the contaminant-transport phase. The model uses a finite-element formulation to solve the basic equations of flow and conservation of mass in the horizontal plane. A finite difference formulation is used in the vertical direction. The contaminant fate and transport mechanisms considered by the model include advection, dispersion and adsorption. In addition, the model allows the following:



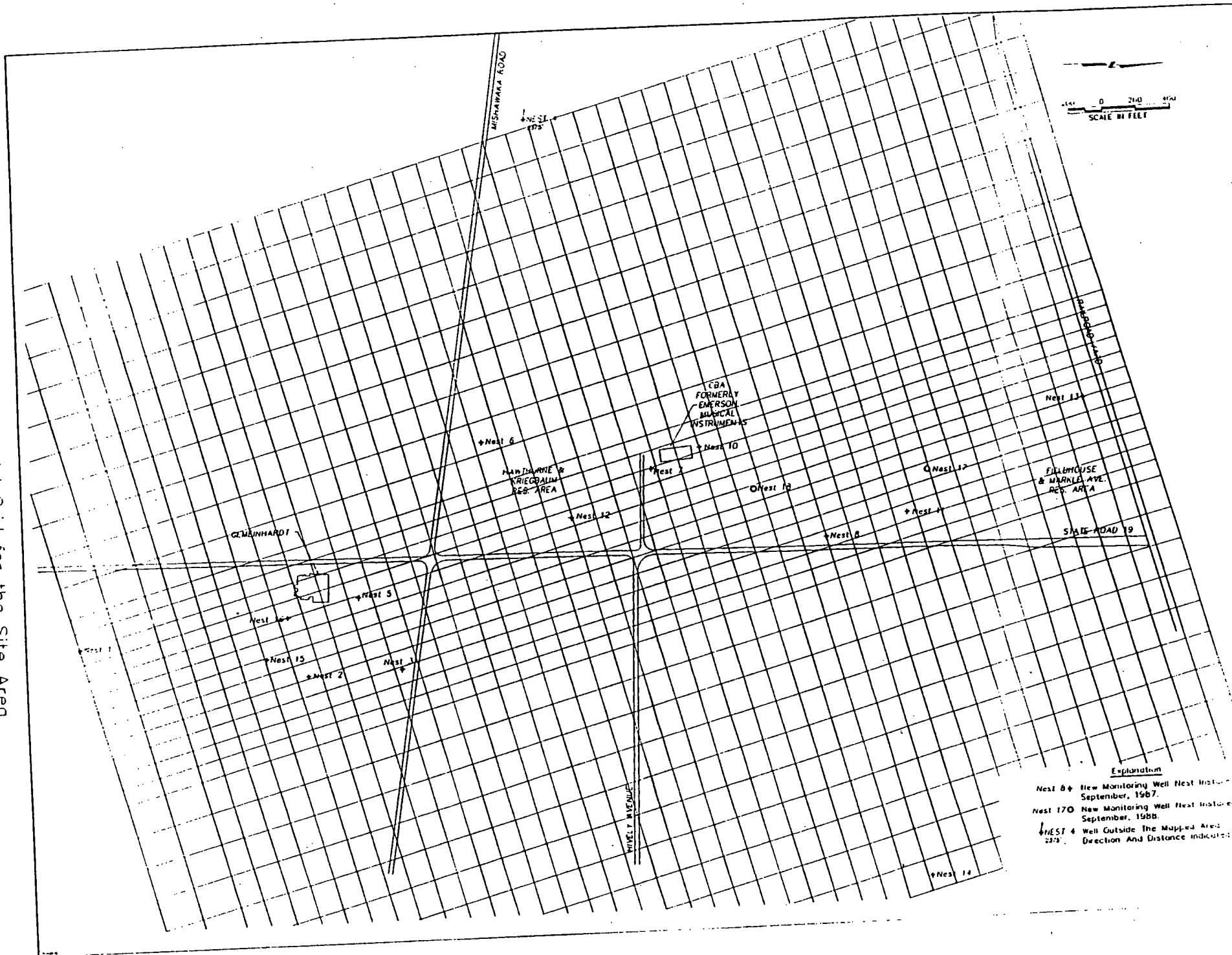
- o source conditions consisting of either a specified contaminant-flux rate or specified concentration;
- o boundary conditions consisting of a specified water elevation or a specified flux rate; three-dimensional, element-by-element variations in aquifer thickness, layer thickness, hydraulic conductivity and dispersivity; and
- o specification of pumping or injection at any nodal point.

#### 1.4 Model Setup and Calibration

In order to apply the numerical ground-water model to the Site Area, a finite-element grid was developed and the model boundary conditions and parameters were specified. Grid development consists of partitioning the study area into subregions called elements. Points at which elements intersect are called nodes. Calculations of flow and contaminant conservation are performed at the nodal locations; therefore, the grid spacing determines the precision of model simulations. The model grid developed for the Site Area is shown in Figure B-1. This grid was developed so that the nodal spacing would provide adequate resolution of the contaminant plumes.

Boundary conditions were specified based on hydrogeological data collected by ENSR (1988). These data indicated that the general direction of ground-water flow in the region is north-northwest. The finite element grid was oriented so that the x-axis is approximately parallel to the direction of ground-water flow. No-flux boundary conditions were then specified along the eastern and western model boundaries that are parallel to flow. Ground-water elevation boundary conditions were specified along the northern and southern boundaries in accordance with water-level data collected in October 1987, February 1988, May 1988 and July

Figure B-1 Model Grid for the Site Area.

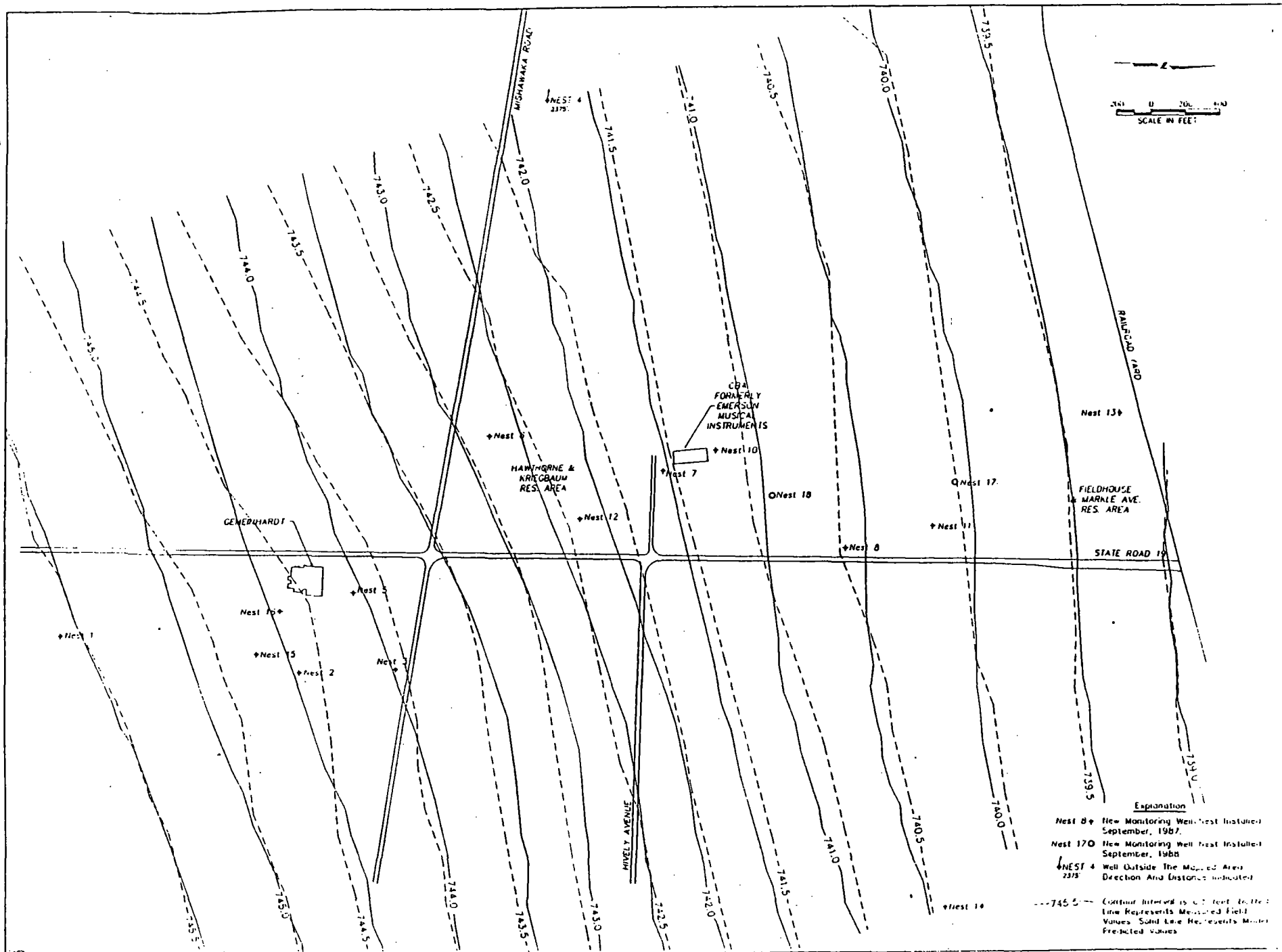


1988 (ENSR, 1988). The May, 1988 data were used as a representative sample to calibrate the flow portion of the model. The ground-water elevation boundaries that were specified were interpolated from the May 1988 data to the north and south nodes using a geostatistical interpolation technique known as kriging (Journal and Huijbregts, 1978). The FORTRAN code AKRIP (Kafritsas and Bras, 1984) was used to perform the kriging.

Values for aquifer and layer thickness were derived from information presented in the preliminary hydrogeological report (ENSR, 1988). These values were kriged to the nodes in the grid using AKRIP. Initial estimates of hydraulic conductivity were based on slug tests performed at the 14 well nests installed by ENSR (1988). Some of these estimates were confirmed with laboratory grain-size analyses and falling-head permeability tests. Calibration of the flow portion of the model involved refinement of the hydraulic conductivity values until predicted ground-water elevations were in good agreement with actual ground-water elevation from field data (Figure B-2). The closeness of this agreement is a measure of the accuracy with which the model is able to describe ground-water flow conditions and the movement of contaminants in the ground water. To obtain this fit between the predicted and observed ground-water elevations, some of the hydraulic conductivity values used in the model were changed no more than an order of magnitude from measured hydraulic conductivity values. A plot of the final kriged natural log hydraulic conductivities used for the model is presented in Figure B-3.

The contaminant transport portion of the model was calibrated by adjusting the duration and magnitude of the contaminant source and the magnitude of the dispersivity values. These values were adjusted until the model closely simulated contaminant concentration values measured by ENSR (1988). The selection of these parameters is discussed below. The tetrachloroethene data were used to calibrate the

Figure B-2 Site Area Water-Table Map Of Measured Field Values  
 Taken May 1988 and Predicted Model Values.



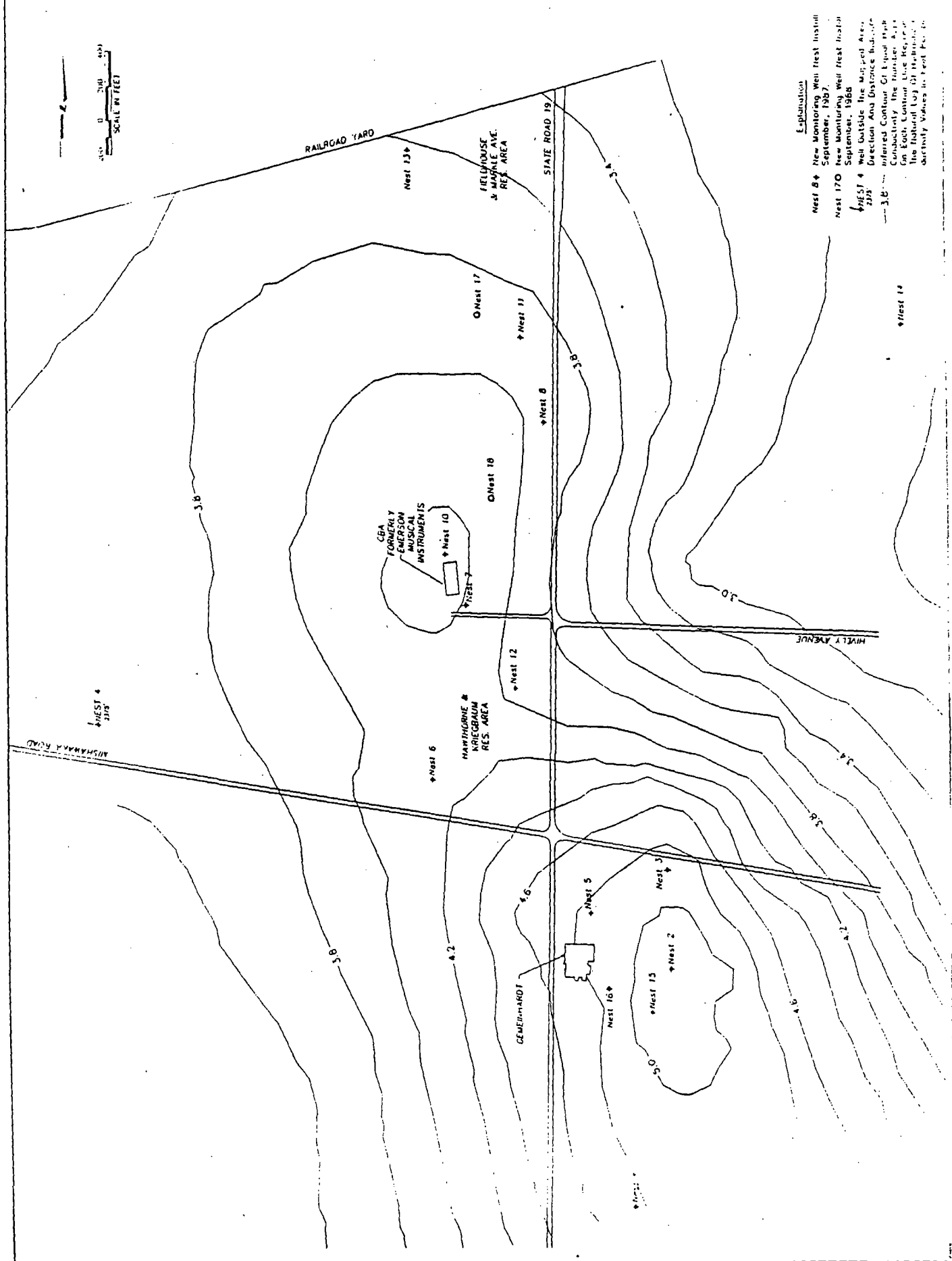


Figure B-3 Site Area Log Hydraulic Conductivity Values used in the Model.

contaminant-transport parameters; these data were chosen to calibrate to for a variety of reasons. First, tetrachloroethene was used for a relatively short and well-defined period of time, facilitating the specification of the source strength. Secondly, there is no documentation of another source of tetrachloroethene in the immediate vicinity, so it is more likely that the plume, as sampled in 1988, is only a result of a source near well nest 5.

The longitudinal and transverse dispersivity values were adjusted until the width and length of the modeled plume match the sampled values. Due to the sparse nature of reliable contaminant data, it is difficult to determine exactly how much dispersion has taken place. Numerical dispersion in the model makes an exact selection of dispersivity values impossible. The dispersivity values used in the calibration were 50 ft and 10 ft for the longitudinal and transverse dispersivities, respectively. Although the transverse dispersivity predicts a slightly wider plume than is observed, attempting to use a smaller value results in numerical instabilities in the model. The difference between the width of the observed and predicted plumes is not significant for the purposes of the model.

To calibrate the contaminant plume, the possibility of adsorption of the contaminant to the aquifer deposits was considered. If the contaminant of interest is adsorbed, the general effect will be to slow the movement of the plume. The degree to which a contaminant is adsorbed is proportional to the fraction of organic carbon content of the aquifer. The fraction of organic carbon values measured in samples collected in the Site Area ranged from 0.03% to 0.17%, with most of the non-clayey soils having values at the low end. These values are very low and suggest that very little contaminant adsorption is occurring. Using the ground-water velocities calculated during the first phase of the model calibration and assuming no retardation, the position of the plume predicted by the model closely matches the observed plume location.



# John C. Wallace, Inc.

*Environmental Consultant*

1215 Whitehall Drive

South Bend, Indiana 46615

Telephone 219-233-7141

February 26, 1991

Mr. Mark Billington

IDEM

Office of Environmental Response

UST Section

5500 West Bradbury Ave.

Indianapolis, IN 46241

RE: Tank Closure

Anco Products

2500 17th St.

Elkhart, IN 46517

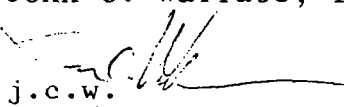
Dear Mark:

Enclosed please find Closure Notification Form. A document dated February 20, 1991 was submitted to your attention, in which a description of the efforts surrounding the assessment of the USTs and the site in general was delineated.

Thank you for your time and consideration in this matter. If there are any questions regarding the information submitted to you, please do not hesitate to contact my office at your earliest convenience.

Very truly yours,

John C. Wallace, Inc.

  
j.c.w.

Note: Starks Excavating has applied for a Certification Number. Upon receipt of said number, an addendum will follow to be attached to the enclosed Closure Notification.



## Underground Storage Tank Closure Notification Form

Mail 30 days prior to intended tank closure date to:  
Indiana Dept. of Environmental Management  
Office of Environmental Response  
UST Section/Closure Notice  
5500 West Bradbury Avenue  
Indianapolis, IN 46241

### Tank Owner Information

Owner Name: Mr. Howard Tomlinson  
Street Address: 2500 S. 17th St.  
City, State, Zip: Elkhart IN. 46517  
Telephone: 219 293 5574  
Contact Person: Al Guantiano

### Tank Location Information

Location Name: Anco Products  
Street Address: 2500 S. 17th St  
City, State, Zip: Elkhart. IN 46517  
Telephone/County: 219 293 5574 /Elkhart  
Contact Person: Al Guantiano

### Tank Information

Tank #	Size (gallons)	Contents	Age	Closure Method	Comments
1)	25,000	empty	unknown	fill in place	
2)	25,000	empty	unknown	fill in place	

Intended Closure Date March 28, 1991

### Contractor Information

Name: Starks Excavating  
Street Address: 14950 M. 60  
City, State, Zip: Three Rivers MI 49093  
Telephone: 616 270 9265  
Contact Person: Rick Starks  
Certification Number: \_\_\_\_\_

### Fire Department Information

Department Name: Elkhart Fire Dept.  
Street Address: 500 East St.  
City, State, Zip: Elkhart, IN 46516  
Telephone: 219 293 8031  
Contact Person: Steve Gatman

Tank closures must be performed by persons certified by the  
State Fire Marshal's Office

Tank Owner Signature Howard Tomlinson

Date Signed Feb 26, 1991

If the intended closure date is changed please contact IDEM at  
(317) 243-5022 .

If the site assessment shows signs of soil contamination please call  
(317) 243-5022 .

## Underground Storage Tank Closure Notification Form

Mail 30 days prior to intended tank closure date to:  
Indiana Dept. of Environmental Management  
Office of Environmental Response  
UST Program  
P.O. Box 7015  
Indianapolis, IN 46207-7015

### Tank Owner Information

Owner Name: Mr. Howard Tomlinson  
Street Address: 2500 South 17th Street  
City, State, Zip: Elkhart, IN 46517  
Telephone: (219) 293-5574  
Contact Person: Al Guantiano

### Tank Location Information

Location Name: Anco Products, Inc.  
Street Address: 2500 South 17th Street  
City, State, Zip: Elkhart, IN 46517  
Telephone: (219) 293-5574  
Contact Person: Al Guantiano

### Tank Information

Tank #	Size (gallons)	Contents	Age	Closure Method	Comments
1)	@ 5,000	Waste Solvent	unknown	fill with inert material	
2)	@ 5,000	Waste Solvent	unknown	fill with inert material	

Intended Closure Date October 13, 1989

### Contractor Information

Name: C.H.E.S. Consultants  
Street Address: 716 Lincolnway West  
City, State, Zip: Osceola, IN 46561  
Telephone: (219) 674-0951  
Contact Person: John Wallace

### Fire Department Information

Department Name: Elkhart City Fire Dept.  
Street Address: 500 East Street  
City, State, Zip: Elkhart, IN 46516  
Telephone: (219) 293-8931  
Contact Person: Dennis Mann

Tank Owner Signature \_\_\_\_\_

Date Signed \_\_\_\_\_

If the intended closure date is changed please contact IDEM at  
(317) 243-5022 .

If the site assessment shows signs of soil contamination please call  
(317) 243-5022 .



# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

105 South Meridian Street  
P.O. Box 6015  
Indianapolis 46206-6015  
Telephone 317/232-8603

January 18, 1990

Mr. H. Tomlinson  
Anco Products  
2500 South 17th Street  
Elkhart, Indiana 46617

Dear Mr. Tomlinson:

This office has received your Notification for Underground Storage Tanks. However, the following requested information was incomplete:

Additional information for tanks permanently taken out of service.

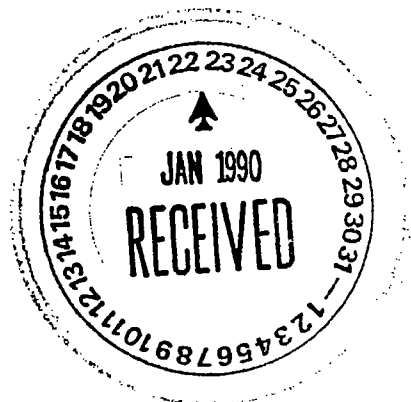
Certification signature in ink.

Enclosed you will find your notification form that is to be completed with the requested information. Please resubmit your notification form within ten (10) days from receipt of this letter. If you have any questions, please contact our office at AC 317/243-5022.

Sincerely,

Anne D. Black, Chief  
Underground Storage Tank Section  
Office of Environmental Response

DD/bo  
Enclosure



An Equal Opportunity Employer

I.D. Number

STATE USE ONLY

Date Received

(317) 243-5060

GENERAL INFORMATION

Notification is required by Federal law for underground storage tanks that have been used to store regulated substances since January 1, 1974, that are in the ground as of May 8, 1986, or that are brought into use after May 8, 1986. The information requested is required by Section 9002 of the Resource Conservation and Recovery Act, (RCRA), as amended.

DEC 21 1989

The primary purpose of this notification program is to locate and evaluate underground tanks that store or have stored petroleum or hazardous substances. It is expected that the information you provide will be based on reasonably available records, or, in the absence of such records, your knowledge, belief, or recollection.

**Who Must Notify?** Section 9002 of RCRA, as amended, requires that, unless exempted, owners of underground tanks that store regulated substances must notify designated State or local agencies of the existence of their tanks. Owner means—  
(a) in the case of an underground storage tank in use on November 8, 1984, or brought into use after that date, any person who owns an underground storage tank used for the storage, use, or dispensing of regulated substances; and  
(b) in the case of any underground storage tank in use before November 8, 1984, but no longer in use on that date, any person who owned such tank immediately before the discontinuation of its use.

**What Tanks Are Included?** Underground storage tank is defined as any one or combination of tanks that (1) is used to contain an accumulation of "regulated substances," and (2) whose volume (including connected underground piping) is 10% or more beneath the ground. Some examples are underground tanks storing: 1. gasoline, used oil, or diesel fuel, and 2. industrial solvents, pesticides, herbicides or fumigants.

**What Tanks Are Excluded?** Tanks removed from the ground are not subject to notification. Other tanks excluded from notification are:

1. farm or residential tanks of 1,100 gallons or less capacity used for storing motor fuel for noncommercial purposes;
2. tanks used for storing heating oil for consumptive use on the premises where stored;
3. septic tanks;

4. pipeline facilities (including gathering lines) regulated under the Natural Gas Pipeline Safety Act of 1968, or the Hazardous Liquid Pipeline Safety Act of 1979, or which is an intrastate pipeline facility regulated under State laws;
5. surface impoundments, pits, ponds, or lagoons;
6. storm water or waste water collection systems;
7. flow-through process tanks;
8. liquid traps or associated gathering lines directly related to oil or gas production and gathering operations;
9. storage tanks situated in an underground area (such as a basement, cellar, mineworking, drift, shaft, or tunnel) if the storage tank is situated upon or above the surface of the floor.

**What Substances Are Covered?** The notification requirements apply to underground storage tanks that contain regulated substances. This includes any substance defined as hazardous in section 101 (14) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), with the exception of those substances regulated as hazardous waste under Subtitle C of RCRA. It also includes petroleum, e.g., crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute).

**Where To Notify?** Completed notification forms should be sent to the address given at the top of this page.

**When To Notify?** 1. Owners of underground storage tanks in use or that have been taken out of operation after January 1, 1974, but still in the ground, must notify by May 8, 1986. 2. Owners who bring underground storage tanks into use after May 8, 1986, must notify within 30 days of bringing the tanks into use.

**Penalties:** Any owner who knowingly fails to notify or submits false information shall be subject to a civil penalty not to exceed \$10,000 for each tank for which notification is not given or for which false information is submitted.

INSTRUCTIONS

Please type or print in ink all items except "signature" in Section V. This form must be completed for each location containing underground storage tanks. If more than 5 tanks are owned at this location, photocopy the reverse side, and staple continuation sheets to this form.

Indicate number of continuation sheets attached

I. OWNERSHIP OF TANK(S)

Owner Name (Corporation, Individual, Public Agency, or Other Entity)

Howard Tomlinson, Anco Products

Street Address

2500 South 17th Street

County

Elkhart

City

State

ZIP Code

Elkhart,

IN

46617

Area Code

Phone Number

(219)

293-5574

Type of Owner (Mark all that apply ☒)

☒ Current

☐ State or Local Gov't

☒ Private or Corporate

☐ Former

☐ Federal Gov't  
(GSA facility I.D. no.)

☐ Ownership uncertain

II. LOCATION OF TANK(S)

(If same as Section I, mark box here ☒)

Facility Name or Company Site Identifier, as applicable

Street Address or State Road, as applicable

County

City (nearest)

State

Indicate number of tanks at this location

2

Mark box here if tank(s) are located on land within an Indian reservation or on other Indian trust lands

III. CONTACT PERSON AT TANK LOCATION

Name (If same as Section I, mark box here ☐)

Job Title

Area Code

Phone Number

Al Guantiano

Maintenance Supervisor

(219) 293-5574

IV. TYPE OF NOTIFICATION

☐ Mark box here only if this is an amended or subsequent notification for this location.

V. CERTIFICATION (Read and sign after completing Section VI.)

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

Name and official title of owner or owner's authorized representative  
Howard Tomlinson, President

Signature

Date Signed

1/22/90

CONTINUE ON REVERSE SIDE

**VI. DESCRIPTION OF UNDERGROUND STORAGE TANKS (Complete for each tank at this location.)**

Tank Identification No. (e.g., ABC-123), or Arbitrarily Assigned Sequential Number (e.g., 1,2,3...)	Tank No. <u>1</u>	Tank No. <u>2</u>	Tank No.	Tank No.	Tank No.
<b>1. Status of Tank</b> (Mark all that apply <input checked="" type="checkbox"/> ) Currently in Use <input type="checkbox"/> Temporarily Out of Use <input checked="" type="checkbox"/> Permanently Out of Use <input type="checkbox"/> Brought into Use after 5/8/86 <input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>2. Estimated Age (Years)</b>	<u>15</u>	<u>15</u>			
<b>3. Estimated Total Capacity (Gallons)</b>	<u>10,000</u>	<u>10,000</u>			
<b>4. Material of Construction</b> (Mark one <input checked="" type="checkbox"/> ) Steel <input checked="" type="checkbox"/> Concrete <input type="checkbox"/> Fiberglass Reinforced Plastic <input type="checkbox"/> Unknown <input type="checkbox"/> Other, Please Specify <u>Stainless</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>5. Internal Protection</b> (Mark all that apply <input checked="" type="checkbox"/> ) Cathodic Protection <input type="checkbox"/> Interior Lining (e.g., epoxy resins) <input type="checkbox"/> None <input checked="" type="checkbox"/> Unknown <input type="checkbox"/> Other, Please Specify _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>6. External Protection</b> (Mark all that apply <input checked="" type="checkbox"/> ) Cathodic Protection <input type="checkbox"/> Painted (e.g., asphaltic) <input type="checkbox"/> Fiberglass Reinforced Plastic Coated <input type="checkbox"/> None <input type="checkbox"/> Unknown <input type="checkbox"/> Other, Please Specify <u>Cement</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>7. Piping</b> (Mark all that apply <input checked="" type="checkbox"/> ) Bare Steel <input type="checkbox"/> Galvanized Steel <input type="checkbox"/> Fiberglass Reinforced Plastic <input type="checkbox"/> Cathodically Protected <input type="checkbox"/> Unknown <input type="checkbox"/> Other, Please Specify <u>REMOVED</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>8. Substance Currently or Last Stored in Greatest Quantity by Volume</b> (Mark all that apply <input checked="" type="checkbox"/> ) a. Empty <input checked="" type="checkbox"/> b. Petroleum <input type="checkbox"/> Diesel <input type="checkbox"/> Kerosene <input type="checkbox"/> Gasoline (including alcohol blends) <input type="checkbox"/> Used Oil <input type="checkbox"/> Other, Please Specify _____ c. Hazardous Substance <input checked="" type="checkbox"/> Please Indicate Name of Principal CERCLA Substance OR Chemical Abstract Service (CAS) No. _____ Mark box <input checked="" type="checkbox"/> if tank stores a mixture of substances d. Unknown <input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>9. Additional Information (for tanks permanently taken out of service)</b>					
a. Estimated date last used (mo/yr)	<u>/</u>	<u>/</u>	<u>/</u>	<u>/</u>	<u>/</u>
b. Estimated quantity of substance remaining (gal.)					
c. Mark box <input checked="" type="checkbox"/> if tank was filled with inert material (e.g., sand, concrete)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



**Anco Products, Incorporated  
2500 South 17th Street  
Elkhart, Indiana**

**Continuing Investigation Report**

**As Prepared By:**

***Industrial Safety and Environmental Services*  
716 Lincolnway West  
Osceola, Indiana 46561**

**I**NDUSTRIAL  
**S**AFETY AND  
**E**NVIRONMENTAL  
**S**ERVICES

P.O. BOX 233 • OSCEOLA, IN 46561 • PHONE: (219) 259-4138

---

Mr. Howard Tomlinson  
President  
Anco Products, Incorporated  
2500 South 17th Street  
Elkhart, Indiana 46517

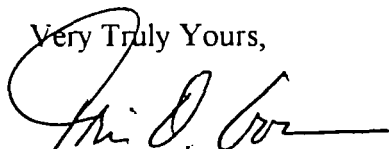
April 8, 1993

Dear Howard,

The attached report is intended to provide an overview of studies performed at Anco Products, Incorporated (Project Site). I trust that this information will provide for a more thorough understanding of the work performed relative to chemical constituents present in groundwater at the project site.

Should you have any further questions, please feel free to contact our office at your earliest convenience.

Very Truly Yours,



Tris O. Gour  
Industrial Safety and Environmental Services

**ENCLOSURE**



## **I. Introduction**

Industrial Safety and Environmental Services (ISES) is retained by Anco Products, Incorporated, 2500 South 17th Street, Elkhart, Indiana, (Project Site) to assess current groundwater conditions. As part of this assessment, a groundwater investigation was conducted during February and March 1993. In addition, review of findings from previous investigations conducted at the project site were also reexamined in order to provide for more thorough final documentation. In cases where previous reports prove beneficial to interpretation, they have been included as appendix's of this document. This report presents the findings as of February and March 1993.

## **II. Site Background**

The current building located at 2500 South 17th Street, Elkhart, Indiana, was built on or about 1960. The purpose and intent of the initial structure was that of a warehouse for Central Warehouse of Elkhart, Indiana.

In July 1975, the property was transferred to the Dietzgen Corporation. The facility was then primarily used for paper related product manufacturing. As part of their manufacturing process operation, the Dietzgen Corporation had installed two (2) Underground Storage Tanks (UST's) for chemical product storage. It was learned through interviews with personnel that were employed with the Dietzgen Corporation that the product contained in the UST's was acetone.

Transfer of property from the Dietzgen Corporation to Lee R. Anderson, current owner of Anco Products, Incorporated occurred during June 1977. At present, the project site is engaged in the process of manufacturing insulating products and flexible air ducts. The project site discharges only sanitary wastewater to the Elkhart Publicly Owned Treatment Works (POTW). Water is supplied to the manufacturing facility by the POTW. In addition, there are no drywells, septic/field systems, nor retention basins located at the project site. It should also be stated that the facility does not generate hazardous waste as defined by Environmental Protection Agency (EPA) regulation/definition.

The UST's located at the project site were initially thought to be taken "out of service" when Lee R. Anderson purchased the property. After learning that the UST's had not been removed or closed in place, it was decided by representatives of Anco Products, that closure would take place.

During the time of UST closure, four (4) monitoring wells were installed at the project site. Hollow-stem auger techniques were used with a screened lead auger to evaluate the vertical and lateral extent of potential groundwater constituent plume(s). Four soil borings were drilled and all were converted to monitoring wells. Each borehole was logged by a field operator qualified to identify subsurface conditions. Locations of the monitoring wells are contained in **Appendix I**. All pertinent field and geological data were recorded. Boring locations were chosen judgementally. This method requires a limited knowledge relevant to historical usage of the property including visual assessment methodologies. The project site was assessed for inferred groundwater flow and surface run-off as depicted in the Indiana Department of Natural Resources (IDNR) document; Saint Joseph River Basin, Water Resource Assessment, 87-1.

The measuring point elevations of all installed monitoring wells were surveyed by a registered land surveyor and referenced to a site benchmark. **Table II-1** lists the monitoring well elevations. Locations of the borings are contained in the topography collected and developed by Saylor Land Surveying, 9038 East, 50 North, Mill Creek, Indiana.

Included in the topography are groundwater elevations and groundwater flow as determined by a Hydrogeologist. Directional groundwater flow for the project site is North, Northeast (NNE). It should be stated that the directional flow of NNE is inconsistent with regional flow patterns to the Saint Joseph River Basin, or to the North Northwest (NNW).

The installed monitoring wells consist of a clean sand filter pack installed around the well screen to a level two feet above the top of the screen, followed by a two foot bentonite seal. The annulus of the monitoring well was sealed with a bentonite/cement slurry backfill. The wells were then secured with a locking cap. A generalized flush mount well construction diagram is presented in **Appendix II**. Following the completion of drilling, and installation of the monitoring wells, the monitoring wells were developed using a Geo-Tech hand pump or Teflon Bailer. A minimum of twenty well volumes of the groundwater was purged due to the presence of silty fine grain sands.

Based upon information prepared, reviewed, and submitted, the UST's were closed in accordance with EPA methodology.

**ANCO PRODUCTS, INCORPORATED  
ELKHART, INDIANA**

**TABLE 11 - 1**

**MONITORING WELL ELEVATION (FEET)**

**MARCH 25, 1993**

<u>MONITOR WELL</u>	<u>STATIC LEVEL</u>	<u>TOP OF PVC TO GROUND</u>	<u>TOP OF PVC TO BOTTOM OF THE MONITOR WELL</u>
MW 1	12.5	N/A	23.35
MW 2	15.0	2.75	25.6
MW 3	15.2	2.8	25.4
MW 4	13.9	2.9	25.6

**WEATHER CONDITIONS: 50 DEGREES; CLOUDY**

Closure documents were filed with the Indiana Department of Environmental Management (IDEM) to include copies of analytical results meeting the criteria for UST closure. Based upon findings, it was determined that the UST's did not impact soil or groundwater at the project site.

As part of additional environmental related concerns, it was decided upon by representatives of Anco Products to conduct annual monitoring of groundwater at the project site. Upon recommendation by engineering/consulting firms, future laboratory analysis of groundwater collected from the monitoring wells will include parameters identified as Volatile Organic Compounds (VOC's).

### **III. Detection Of TCE And TCA**

After closure of the UST's was completed, sampling of the monitoring wells were conducted in December 1990, September 1991, and February 1992. **Table III-1** provides an overview of analytical results from each sampling round.

Contained in **Appendix III** are analytical results from December 1990. Contained in **Appendix IV** are analytical results from September 1991. Contained in **Appendix V** are analytical results from February 1992.

Since laboratory results verified the presence of Trichloroethylene (TCE) and 1,1,1-Trichloroethane (TCA) it was determined that off-site sources should be evaluated to determine if their chemical usage could have impacted the project site.

As part of Anco Products continuing efforts to identify source(s) of TCE and TCA contamination, an "Assessment Update" was prepared by John C. Wallace, Incorporated, South Bend, Indiana, on August 21, 1991. The assessment update is included in **Appendix VI** of this document.

### **IV. Submission Of Documents To Regulating Agencies**

During the course of investigation conducted, it was decided upon by representatives of Anco Products that results of findings would be submitted to the IDEM as part of an information sharing effort. On July 24, 1991, a report prepared by John C. Wallace, Incorporated, South Bend, Indiana, was submitted to Mr. Harry Ackerson, IDEM. This report is contained in **Appendix VII**.

ANCO PRODUCTS, INCORPORATED  
ELKHART, INDIANA

TABLE 111 - 1

POSITIVE GROUNDWATER RESULTS

1990 RESULTS

	<u>MW 1</u>	<u>MW 2</u>	<u>MW 3</u>	<u>MW 4</u>
<u>TCE</u>	22	81	6.9	8.9
<u>TCA</u>	ND	ND	4.7	2.6

1991 RESULTS

	<u>MW 1</u>	<u>MW 2</u>	<u>MW 3</u>	<u>MW 4</u>
<u>TCE</u>	13	8.5	64	20
<u>TCA</u>	9.8	3.1	ND	1.2

1993 RESULTS

	<u>MW 1</u>	<u>MW 2</u>	<u>MW 3</u>	<u>MW 4</u>
<u>TCE</u>	17	38	6.8	14
<u>TCA</u>	ND	ND	3.1	3.6

● ALL RESULTS EXPRESSED IN PARTS PER BILLION

At the time of report preparation, it was believed by representatives of Anco Products that TCE was never used at the project site. It was stated in the submitted report that "**Anco Products, Incorporated has never used Trichloroethylene (TCE) in their manufacturing processes**". However, during the course of records reviewed by senior management, it was learned that TCE was used for equipment cleaning purposes. All equipment cleaning was conducted in-house with the TCE evaporating after it was applied to equipment/machinery components. Application methods were that of "cleaning rags". TCE was never sprayed nor contained in degreasing tanks at the project site which is more consistent with its historical industrial usage. In addition, TCE was never generated as a hazardous waste nor transported off-site as a hazardous waste.

## **V. Final Discussion**

It is the opinion of ISES that elevated levels of TCE, and TCA are not the result of manufacturing operations conducted at the project site.

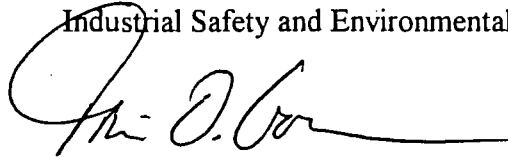
The manufacturing facility is always found to be in good condition with respect to chemical storage and process operations associated with chemical usage. It is believed that the efforts put forth thus far by Anco Products have been prudent in trying to determine sources for TCE, and TCA contamination.

Based upon review of the analytical results, it appears that TCE contamination could be leaving the project site. It is recommended that monitoring of the installed wells be directed on a biannual basis. This effort would assist in determining if TCE is moving off-site.

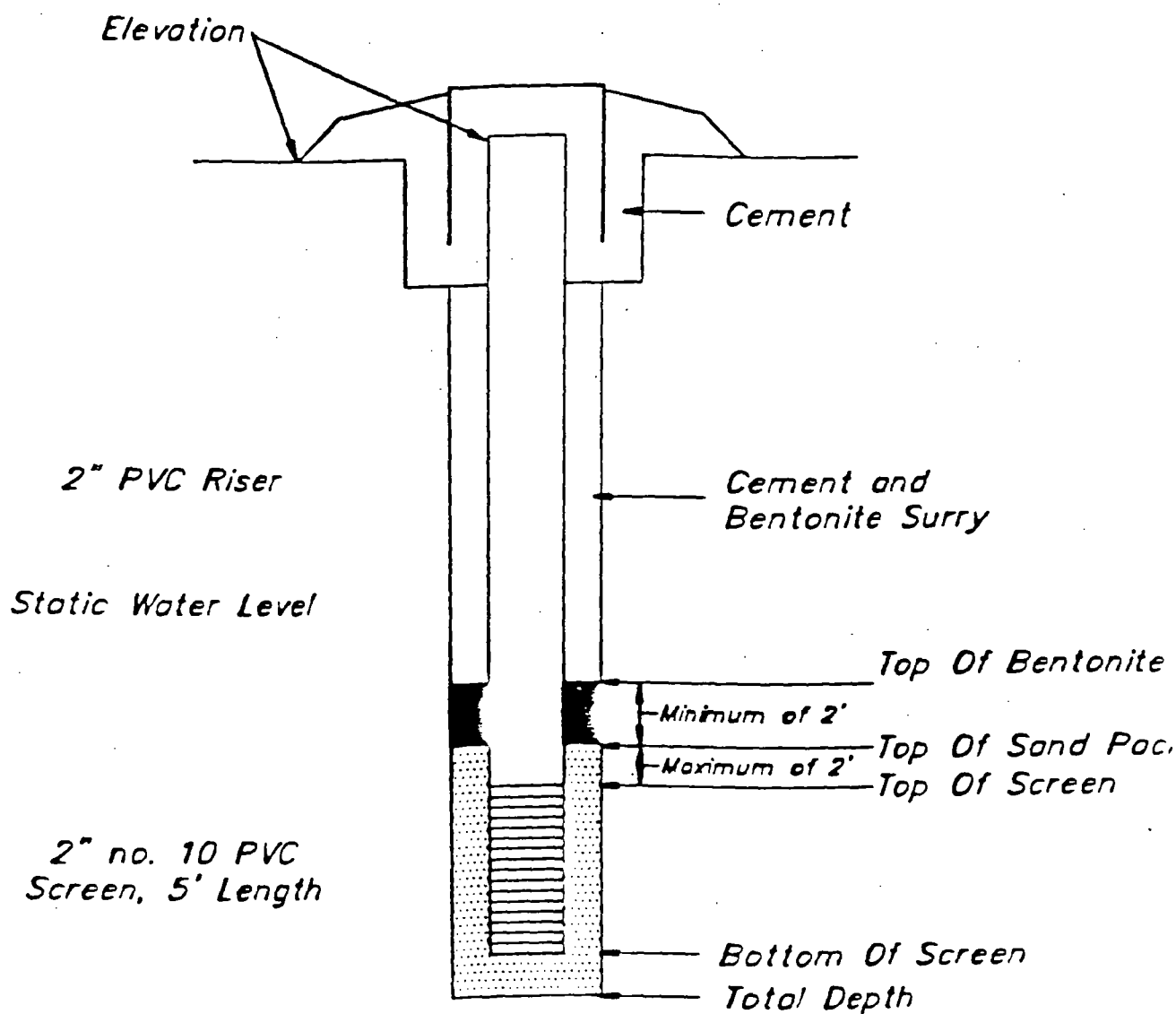
Should additional information become available concerning the project site or adjacent properties, it may require altering the conclusions of this report. Such information would need to be made available to ISES in the event that the contents would need to be modified.

Should you have any questions, please feel free to contact our office at your earliest convenience.

Industrial Safety and Environmental Services

A handwritten signature in black ink, appearing to read "Tris O. Gour", with a long horizontal flourish extending to the right.

By:  
Tris O. Gour  
April 8, 1993



*(Not to Scale)*

## WELL CONSTRUCTION DIAGRAM FOR MONITORING WELLS



Sample description - Anco :  
Anco tank assessment

Sample ID = 90-12-80-1


Parameter: Purgeables(601/02)

Matrix: Water

Date analyzed: December 17, 1990

Method: Purge & Trap

Compound	Concentration ug/l	Detection Limit ug/l
Dichlorodifluoromethane	ND	< 1.0
Chloromethane	ND	< 2.0
Vinyl chloride	ND	< 2.0
Chloroethane	ND	< 2.0
Bromoethane	ND	< 1.5
1,1-Dichloroethene	ND	< 0.4
Methylene chloride	ND	< 2.0
t-1,2-Dichloroethene	ND	< 0.2
1,1-Dichloroethane	ND	< 0.3
c-1,2-Dichloroethene	ND	< 0.2
Chloroform	ND	< 1.0
1,1,1-Trichloroethane	2.6	< 0.2
Carbon tetrachloride	ND	< 0.2
Benzene	ND	< 0.4
1,2-Dichloroethane	ND	< 0.2
Trichloroethene	8.9	< 0.5
1,2-Dichloropropane	ND	< 1.0
Bromodichloromethane	ND	< 0.5
2-Chloroethylvinyl ether	ND	< 0.5
t-1,3-Dichloropropene	ND	< 1.0
Toluene	ND	< 0.2
c-1,3-Dichloropropene	ND	< 1.0
1,1,2-Trichloroethane	ND	< 1.0
Tetrachloroethene	ND	< 1.0
Dibromochloromethane	ND	< 1.0
Chlorobenzene	ND	< 0.2
Ethylbenzene	ND	< 0.2
m+p-Xylene	ND	< 0.2
o-Xylene	ND	< 0.2
Bromoform	ND	< 0.9
1,1,2,2-Tetrachloroethane	ND	< 0.7
1,3-Dichlorobenzene	ND	< 0.4
1,4-Dichlorobenzene	ND	< 0.4
1,2-Dichlorobenzene	ND	< 0.4

  
Analyst: R. S. Lynch

**DIHYDRO ANALYTICAL SERVICES**

Dihydro Analytical Services, 4455 Fletcher, Wayne, MI, (313) 595-0335

AD-1000-10 DIHYDRO  
SERVICES

Sample description - Anco 2  
Anco tank assessment

Sample ID = 90-12-80-2


Parameter: Purgeables(601/02)

Date analyzed: December 17, 1990

Matrix: Water

Method: Purge & Trap

Compound	Concentration ug/l	Detection Limit ug/l
Dichlorodifluoromethane	ND	< 1.0
Chloromethane	ND	< 2.0
Vinyl chloride	ND	< 2.0
Chloroethane	ND	< 2.0
Bromoethane	ND	< 1.5
1,1-Dichloroethene	ND	< 0.4
Methylene chloride	ND	< 2.0
t-1,2-Dichloroethene	ND	< 0.2
1,1-Dichloroethane	ND	< 0.3
c-1,2-Dichloroethene	ND	< 0.2
Chloroform	ND	< 1.0
1,1,1-Trichloroethane	4.7	< 0.2
Carbon tetrachloride	ND	< 0.2
Benzene	ND	< 0.4
1,2-Dichloroethane	ND	< 0.2
Trichloroethene	6.9	< 0.5
1,2-Dichloropropane	ND	< 1.0
Bromodichloromethane	ND	< 0.5
2-Chloroethylvinyl ether	ND	< 0.5
t-1,3-Dichloropropene	ND	< 1.0
Toluene	ND	< 0.2
c-1,3-Dichloropropene	ND	< 1.0
1,1,2-Trichloroethane	ND	< 1.0
Tetrachloroethene	ND	< 1.0
Dibromochloromethane	ND	< 1.0
Chlorobenzene	ND	< 0.2
Ethylbenzene	ND	< 0.2
m+p-Xylene	ND	< 0.2
o-Xylene	ND	< 0.2
Bromoform	ND	< 0.9
1,1,2,2-Tetrachloroethane	ND	< 0.7
1,3-Dichlorobenzene	ND	< 0.4
1,4-Dichlorobenzene	ND	< 0.4
1,2-Dichlorobenzene	ND	< 0.4

  
Analyst: R. S. Lynch

**DIHYDRO ANALYTICAL SERVICES**

Dihydro Analytical Services, 4455 Fletcher, Wayne, MI, (313) 595-0335

A Division of

**DIHYDRO**  
LABORATORIES

Sample description - Anco 3  
Anco tank assessment

Sample ID = 90-12-80-3

Parameter: Purgeables(601/02)

Date analyzed: December 17, 1990

Matrix: Water

Method: Purge & Trap

Compound	Concentration ug/l	Detection Limit ug/l
Dichlorodifluoromethane	ND	< 1.0
Chloromethane	ND	< 2.0
Vinyl chloride	ND	< 2.0
Chloroethane	ND	< 2.0
Bromoethane	ND	< 1.5
1,1-Dichloroethene	ND	< 0.4
Methylene chloride	ND	< 2.0
t-1,2-Dichloroethene	ND	< 0.2
1,1-Dichloroethane	ND	< 0.3
c-1,2-Dichloroethene	ND	< 0.2
Chloroform	ND	< 1.0
1,1,1-Trichloroethane	ND	< 0.2
Carbon tetrachloride	ND	< 0.2
Benzene	ND	< 0.4
1,2-Dichloroethane	ND	< 0.2
Trichloroethene	81	< 0.5
1,2-Dichloropropane	ND	< 1.0
Bromodichloromethane	ND	< 0.5
2-Chloroethylvinyl ether	ND	< 0.5
t-1,3-Dichloropropene	ND	< 1.0
Toluene	ND	< 0.2
c-1,3-Dichloropropene	ND	< 1.0
1,1,2-Trichloroethane	ND	< 1.0
Tetrachloroethene	ND	< 1.0
Dibromochloromethane	ND	< 1.0
Chlorobenzene	ND	< 0.2
Ethylbenzene	ND	< 0.2
m+p-Xylene	ND	< 0.2
o-Xylene	ND	< 0.2
Bromoform	ND	< 0.9
1,1,2,2-Tetrachloroethane	ND	< 0.7
1,3-Dichlorobenzene	ND	< 0.4
1,4-Dichlorobenzene	ND	< 0.4
1,2-Dichlorobenzene	ND	< 0.4

  
Analyst: R. S. Lynch

**DIHYDRO ANALYTICAL SERVICES**

Dihydro Analytical Services, 4455 Fletcher, Wayne, MI, 48131 595-0335

A Division of **DIHYDRO**  
CORPORATION

Sample description - Anco 4  
Anco tank assessment

Sample ID = 90-12-80-4

Parameter: Purgeables(601/02)

Date analyzed: December 17, 1990

Matrix: Water

Method: Purge & Trap

Compound	Concentration ug/l	Detection Limit ug/l
Dichlorodifluoromethane	ND	< 1.0
Chloromethane	ND	< 2.0
Vinyl chloride	ND	< 2.0
Chloroethane	ND	< 2.0
Bromoethane	ND	< 1.5
1,1-Dichloroethene	ND	< 0.4
Methylene chloride	ND	< 2.0
t-1,2-Dichloroethene	ND	< 0.2
1,1-Dichloroethane	ND	< 0.3
c-1,2-Dichloroethene	ND	< 0.2
Chloroform	ND	< 1.0
1,1,1-Trichloroethane	ND	< 0.2
Carbon tetrachloride	ND	< 0.2
Benzene	ND	< 0.4
1,2-Dichloroethane	ND	< 0.2
Trichloroethene	22	< 0.5
1,2-Dichloropropane	ND	< 1.0
Bromodichloromethane	ND	< 0.5
2-Chloroethylvinyl ether	ND	< 0.5
t-1,3-Dichloropropene	ND	< 1.0
Toluene	ND	< 0.2
c-1,3-Dichloropropene	ND	< 1.0
1,1,2-Trichloroethane	ND	< 1.0
Tetrachloroethene	ND	< 1.0
Dibromochloromethane	ND	< 1.0
Chlorobenzene	ND	< 0.2
Ethylbenzene	ND	< 0.2
m+p-Xylene	ND	< 0.2
o-Xylene	ND	< 0.2
Bromoform	ND	< 0.9
1,1,2,2-Tetrachloroethane	ND	< 0.7
1,3-Dichlorobenzene	ND	< 0.4
1,4-Dichlorobenzene	ND	< 0.4
1,2-Dichlorobenzene	ND	< 0.4

Analyst: R. S. Lynch

**DIHYDRO ANALYTICAL SERVICES**

Dihydro Analytical Services, 4455 Fletcher, Wayne, MI, (313) 595-0335

ADDITIONAL DIHYDRO  
SERVICES

Sample description - Method standard  
90-12-39/-43/-64/-80/-98

SAMPLE ID = MSpike

Parameter: PURGEABLES(601&2)

Date analyzed: 12-17-90

Matrix: Water

Analyst: rsl

Compound	Mean ug/l	Spike ug/l	True Spike ug/l	% Recovery
Methylene chloride	0.0	25.1	21.2	118.6
1,1-Dichloroethane	0.0	24.5	21.8	112.3
Chloroform	0.0	24.8	23.0	107.8
1,1,1-Trichloroethane	0.0	24.4	23.1	105.6
1,2-Dichloroethane	0.0	26.8	22.6	118.7
Trichloroethene	0.0	25.3	25.6	98.8
1,2-Dichloropropane	0.0	22.1	22.5	98.4
Toluene	0.0	23.2	21.0	110.7
1,1,2-Trichloroethane	0.0	24.3	24.4	99.6
Tetrachloroethene	0.0	30.9	32.2	96.0
Chlorobenzene	0.0	18.5	22.5	82.4
Ethylbenzene	0.0	20.7	22.1	93.5
m+p-Xylene	0.0	20.5	21.2	96.8
o-Xylene	0.0	19.4	22.4	86.8
1,1,2,2-Tetrachloroethane	0.0	19.8	21.8	90.8
1,3-Dichlorobenzene	0.0	18.3	22.4	81.9
1,4-Dichlorobenzene	0.0	28.5	27.3	104.3
1,2-Dichlorobenzene	0.0	21.3	23.1	92.2

Sample description - ANCO-1 Monitoring Well

Sample ID = 91-09-97-1

Parameter: Purgeables(601/02) Date analyzed: September 24, 1991

Matrix: Water Method: Purge & Trap

Compound	Concentration ug/l	Detection Limit ug/l
Dichlorodifluoromethane	ND	1.0
Chloromethane	ND	2.0
Vinyl chloride	ND	2.0
Chloroethane	ND	2.0
Bromoethane	ND	1.5
1,1-Dichloroethene	ND	0.4
Methylene chloride	ND	2.0
t-1,2-Dichloroethene	ND	0.2
1,1-Dichloroethane	ND	0.3
c-1,2-Dichloroethene	ND	0.2
Chloroform	ND	1.0
1,1,1-Trichloroethane	9.8	0.2
Carbon tetrachloride	ND	0.2
Benzene	ND	0.4
1,2-Dichloroethane	ND	0.2
Trichloroethene	13	0.5
1,2-Dichloropropane	ND	1.0
Bromodichloromethane	ND	0.5
2-Chloroethylvinyl ether	ND	0.5
t-1,3-Dichloropropene	ND	1.0
Toluene	ND	0.2
c-1,3-Dichloropropene	ND	1.0
1,1,2-Trichloroethane	ND	0.8
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	1.0
Chlorobenzene	ND	0.2
Ethylbenzene	ND	0.2
m+p-Xylene	ND	0.2
o-Xylene	ND	0.2
Bromoform	ND	0.9
1,1,2,2-Tetrachloroethane	ND	0.7
1,3-Dichlorobenzene	ND	0.4
1,4-Dichlorobenzene	ND	0.4
1,2-Dichlorobenzene	ND	0.4

Claudia R. Donase  
Analyst: Claudia R. Donase

DIHYDRO ANALYTICAL SERVICES

DIHYDRO Analytical Services, 4455 Leichter Avenue, St. Louis, MO 63112-3335

DIHYDRO  
ANALYTICAL SERVICES



Sample description - ANCO-3 Monitoring Well

Sample ID = 91-09-97-3

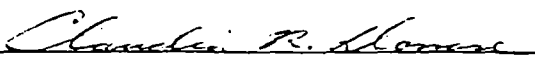
Parameter: Purgeables(601/02)

Date analyzed: September 24, 1991

Matrix: Water

Method: Purge & Trap

Compound	Concentration ug/l	Detection Limit ug/l
Dichlorodifluoromethane	ND	1.0
Chloromethane	ND	2.0
Vinyl chloride	ND	2.0
Chloroethane	ND	2.0
Bromoethane	ND	1.5
1,1-Dichloroethene	ND	0.4
Methylene chloride	ND	2.0
t-1,2-Dichloroethene	ND	0.2
1,1-Dichloroethane	ND	0.3
c-1,2-Dichloroethene	ND	0.2
Chloroform	ND	1.0
1,1,1-Trichloroethane	ND	0.2
Carbon tetrachloride	ND	0.2
Benzene	ND	0.4
1,2-Dichloroethane	ND	0.2
Trichloroethene	64	0.5
1,2-Dichloropropane	ND	1.0
Bromodichloromethane	ND	0.5
2-Chloroethylvinyl ether	ND	0.5
t-1,3-Dichloropropene	ND	1.0
Toluene	ND	0.2
c-1,3-Dichloropropene	ND	1.0
1,1,2-Trichloroethane	ND	0.8
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	1.0
Chlorobenzene	ND	0.2
Ethylbenzene	ND	0.2
m+p-Xylene	ND	0.2
o-Xylene	ND	0.2
Bromoform	ND	0.9
1,1,2,2-Tetrachloroethane	ND	0.7
1,3-Dichlorobenzene	ND	0.4
1,4-Dichlorobenzene	ND	0.4
1,2-Dichlorobenzene	ND	0.4

  
Analyst: Claudia R. Donase

DIHYDRO ANALYTICAL SERVICES

DiHydro Analytical Services, 4455 Fletcher, Wayne, MI, 48186-5935

401-395-0335  
DIHYDRO  
ANALYTICAL SERVICES





Sample description - ANCO-4 Monitoring Well

Sample ID = 91-09-97-4


Parameter: Purgeables(601/02)

Date analyzed: September 24, 1991

Matrix: Water

Method: Purge & Trap

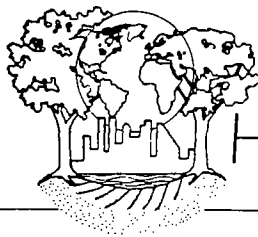
Compound	Concentration ug/l	Detection Limit ug/l
Dichlorodifluoromethane	ND	1.0
Chloromethane	ND	2.0
Vinyl chloride	ND	2.0
Chloroethane	ND	2.0
Bromoethane	ND	1.5
1,1-Dichloroethene	ND	0.4
Methylene chloride	ND	2.0
t-1,2-Dichloroethene	ND	0.2
1,1-Dichloroethane	ND	0.3
c-1,2-Dichloroethene	ND	0.2
Chloroform	ND	1.0
1,1,1-Trichloroethane	ND	0.2
Carbon tetrachloride	ND	0.2
Benzene	ND	0.4
1,2-Dichloroethane	ND	0.2
Trichloroethene	20	0.5
1,2-Dichloropropane	ND	1.0
Bromodichloromethane	ND	0.5
2-Chloroethylvinyl ether	ND	0.5
t-1,3-Dichloropropene	ND	1.0
Toluene	ND	0.2
c-1,3-Dichloropropene	ND	1.0
1,1,2-Trichloroethane	1.2	0.8
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	1.0
Chlorobenzene	ND	0.2
Ethylbenzene	ND	0.2
m+p-Xylene	ND	0.2
o-Xylene	ND	0.2
Bromoform	ND	0.9
1,1,2,2-Tetrachloroethane	ND	0.7
1,3-Dichlorobenzene	ND	0.4
1,4-Dichlorobenzene	ND	0.4
1,2-Dichlorobenzene	ND	0.4

  
Analyst: Claudia E. Donase

DIHYDRO ANALYTICAL SERVICES

DIHYDRO Analytical Services, 4455 Fletcher Wayne, MI 48116-5950-0000





# Environmental Health Laboratories

110 S. Hill Street  
South Bend, IN 46617  
(219) 233-4777  
(219) 233-3272  
FAX (219) 233-8207

## LABORATORY REPORT

Client: Industrial Safety & Environmental Services  
Attn: Tris Gour  
716 Lincolnway West  
Osceola, IN 46561

Report#: 53250-53

Priority: Standard Written

Status: Final

Project/Site: Anco Products

Samples Submitted: Four groundwater samples

Copies to: None

Collected: 02-10-93

By: Client

Received: 02-10-93

### REPORT SUMMARY

**Volatile Organic Chemicals:** The volatile organic chemicals listed below were detected in the water sample submitted for analysis.

Site	Parameter	Results
MW-1	Trichloroethylene	38 µg/L
MW-2	1,1,1-Trichloroethane	3.1 µg/L
	Trichloroethylene	6.8 µg/L
MW-3	1,1,1-Trichloroethane	3.6 µg/L
	Trichloroethylene	14 µg/L
MW-4	Trichloroethylene	17 µg/L

Results of all associated quality control samples were within acceptance limits. No project specific quality control was requested.

This test covers chemical contamination arising from gasoline and other fuels, dry-cleaning and paint solvents, and many other industrial solvents.

Detailed quantitative results are presented on the following pages.

We appreciate the opportunity to provide you with this analysis. If you have any questions concerning this report, please do not hesitate to call us at (219) 233-4777.

REVIEWED BY:

DATE:

03-03-93

FINALIZED BY:

DATE:

03/03/93

**VOLATILE ORGANIC CHEMICALS--Groundwater**

Site: MW-1

Lab #: 53250

Parameter	PQL		Results	
Benzene	0.5	<	0.5	µg/L
Bromobenzene	1.0	<	1.0	µg/L
Bromochloromethane	1.0	<	1.0	µg/L
Bromodichloromethane	0.5	<	0.5	µg/L
Bromoform	0.5	<	0.5	µg/L
Bromomethane	2.0	<	2.0	µg/L
n-Butylbenzene	1.0	<	1.0	µg/L
sec-Butylbenzene	1.0	<	1.0	µg/L
tert-Butylbenzene	1.0	<	1.0	µg/L
Carbon tetrachloride	0.5	<	0.5	µg/L
Chlorobenzene	1.0	<	1.0	µg/L
Chloroethane	2.0	<	2.0	µg/L
Chloroform	0.5	<	0.5	µg/L
Chloromethane	2.0	<	2.0	µg/L
1,2-Chlorotoluene	1.0	<	1.0	µg/L
1,4-Chlorotoluene	1.0	<	1.0	µg/L
Dibromochloromethane	0.5	<	0.5	µg/L
1,2-Dibromo-3-Chloropropane	1.0	<	1.0	µg/L
1,2-Dibromoethane(EDB)	1.0	<	1.0	µg/L
Dibromomethane	1.0	<	1.0	µg/L
1,2-Dichlorobenzene	1.0	<	1.0	µg/L
1,3-Dichlorobenzene	1.0	<	1.0	µg/L
1,4-Dichlorobenzene	0.5	<	0.5	µg/L
Dichlorodifluoromethane	1.0	<	1.0	µg/L
1,1-Dichloroethane	1.0	<	1.0	µg/L
1,2-Dichloroethane	0.5	<	0.5	µg/L
1,1-Dichloroethylene	0.5	<	0.5	µg/L
1,2-Dichloroethylene, cis	1.0	<	1.0	µg/L
1,2-Dichloroethylene, trans	1.0	<	1.0	µg/L
Dichloromethane	1.0	<	1.0	µg/L
1,2-Dichloropropane	1.0	<	1.0	µg/L
1,3-Dichloropropane	1.0	<	1.0	µg/L
2,2-Dichloropropane	1.0	<	1.0	µg/L
1,1-Dichloropropylene	1.0	<	1.0	µg/L
1,3-Dichloropropylene, cis	1.0	<	1.0	µg/L

Continued on the following page.

**VOLATILE ORGANIC CHEMICALS--Groundwater, continued**

Site: MW-1

Lab #: 53250

Parameter	PQL		Results	
1,3-Dichloropropylene,trans	1.0	<	1.0	µg/L
Ethylbenzene	0.5	<	0.5	µg/L
Hexachlorobutadiene	1.0	<	1.0	µg/L
Isopropylbenzene	1.0	<	1.0	µg/L
1,4-Isopropyltoluene	1.0	<	1.0	µg/L
Napthalene	1.0	<	1.0	µg/L
n-Propylbenzene	1.0	<	1.0	µg/L
Styrene	1.0	<	1.0	µg/L
1,1,1,2-Tetrachloroethane	1.0	<	1.0	µg/L
1,1,2,2-Tetrachloroethane	1.0	<	1.0	µg/L
Tetrachloroethylene	1.0	<	1.0	µg/L
Toluene	1.0	<	1.0	µg/L
1,2,3-Trichlorobenzene	1.0	<	1.0	µg/L
1,2,4-Trichlorobenzene	1.0	<	1.0	µg/L
1,1,1-Trichloroethane	0.5	<	0.5	µg/L
1,1,2-Trichloroethane	1.0	<	1.0	µg/L
Trichloroethylene	0.5	<	38	µg/L
Trichlorofluoromethane	1.0	<	1.0	µg/L
1,2,3-Trichloropropane	1.0	<	1.0	µg/L
1,2,4-Trimethylbenzene	1.0	<	1.0	µg/L
1,3,5-Trimethylbenzene	1.0	<	1.0	µg/L
Vinyl chloride	0.5	<	0.5	µg/L
Total Xylenes	1.0	<	1.0	µg/L

If dilutions were required for quantitation of specific parameters, they are indicated by a (√) preceding the result.

Surrogate Standards	Limits (%)	% Recovery
		Undil
Bromofluorobenzene	86-115	97
1,2-Dichloroethane-d4	76-114	94
Toluene - d8	88-110	97

Analyzed: 02-11-93

Analyst: ES

Method: 8260

**VOLATILE ORGANIC CHEMICALS—Groundwater**

Site: MW-2

Lab #: 53251

Parameter	PQL		Results	
Benzene	0.5	<	0.5	µg/L
Bromobenzene	1.0	<	1.0	µg/L
Bromochloromethane	1.0	<	1.0	µg/L
Bromodichloromethane	0.5	<	0.5	µg/L
Bromoform	0.5	<	0.5	µg/L
Bromomethane	2.0	<	2.0	µg/L
n-Butylbenzene	1.0	<	1.0	µg/L
sec-Butylbenzene	1.0	<	1.0	µg/L
tert-Butylbenzene	1.0	<	1.0	µg/L
Carbon tetrachloride	0.5	<	0.5	µg/L
Chlorobenzene	1.0	<	1.0	µg/L
Chloroethane	2.0	<	2.0	µg/L
Chloroform	0.5	<	0.5	µg/L
Chloromethane	2.0	<	2.0	µg/L
1,2-Chlorotoluene	1.0	<	1.0	µg/L
1,4-Chlorotoluene	1.0	<	1.0	µg/L
Dibromochloromethane	0.5	<	0.5	µg/L
1,2-Dibromo-3-Chloropropane	1.0	<	1.0	µg/L
1,2-Dibromoethane(EDB)	1.0	<	1.0	µg/L
Dibromomethane	1.0	<	1.0	µg/L
1,2-Dichlorobenzene	1.0	<	1.0	µg/L
1,3-Dichlorobenzene	1.0	<	1.0	µg/L
1,4-Dichlorobenzene	0.5	<	0.5	µg/L
Dichlorodifluoromethane	1.0	<	1.0	µg/L
1,1-Dichloroethane	1.0	<	1.0	µg/L
1,2-Dichloroethane	0.5	<	0.5	µg/L
1,1-Dichloroethylene	0.5	<	0.5	µg/L
1,2-Dichloroethylene, cis	1.0	<	1.0	µg/L
1,2-Dichloroethylene, trans	1.0	<	1.0	µg/L
Dichloromethane	1.0	<	1.0	µg/L
1,2-Dichloropropane	1.0	<	1.0	µg/L
1,3-Dichloropropane	1.0	<	1.0	µg/L
2,2-Dichloropropane	1.0	<	1.0	µg/L
1,1-Dichloropropylene	1.0	<	1.0	µg/L
1,3-Dichloropropylene, cis	1.0	<	1.0	µg/L

Continued on the following page.

Client: Industrial Safety &amp; Environmental Services

Report#: 53250-53

**VOLATILE ORGANIC CHEMICALS—Groundwater, continued**

Site: MW-2

Lab #: 53251

Parameter	PQL		Results	
1,3-Dichloropropylene,trans	1.0	<	1.0	µg/L
Ethylbenzene	0.5	<	0.5	µg/L
Hexachlorobutadiene	1.0	<	1.0	µg/L
Isopropylbenzene	1.0	<	1.0	µg/L
1,4-Isopropyltoluene	1.0	<	1.0	µg/L
Napthalene	1.0	<	1.0	µg/L
n-Propylbenzene	1.0	<	1.0	µg/L
Styrene	1.0	<	1.0	µg/L
1,1,1,2-Tetrachloroethane	1.0	<	1.0	µg/L
1,1,2,2-Tetrachloroethane	1.0	<	1.0	µg/L
Tetrachloroethylene	1.0	<	1.0	µg/L
Toluene	1.0	<	1.0	µg/L
1,2,3-Trichlorobenzene	1.0	<	1.0	µg/L
1,2,4-Trichlorobenzene	1.0	<	1.0	µg/L
1,1,1-Trichloroethane	0.5		3.1	µg/L
1,1,2-Trichloroethane	1.0	<	1.0	µg/L
Trichloroethylene	0.5		6.8	µg/L
Trichlorofluoromethane	1.0	<	1.0	µg/L
1,2,3-Trichloropropane	1.0	<	1.0	µg/L
1,2,4-Trimethylbenzene	1.0	<	1.0	µg/L
1,3,5-Trimethylbenzene	1.0	<	1.0	µg/L
Vinyl chloride	0.5	<	0.5	µg/L
Total Xylenes	1.0	<	1.0	µg/L

If dilutions were required for quantitation of specific parameters, they are indicated by a (√) preceding the result.

Surrogate Standards	Limits (%)	% Recovery
		Undil
Bromofluorobenzene	86-115	102
1,2-Dichloroethane-d4	76-114	89
Toluene - d8	88-110	96

Analyzed: 02-11-93

Analyst: ES

Method: 8260

**VOLATILE ORGANIC CHEMICALS--Groundwater**

Site: MW-3

Lab #: 53252

Parameter	PQL		Results
Benzene	0.5	<	0.5 µg/L
Bromobenzene	1.0	<	1.0 µg/L
Bromochloromethane	1.0	<	1.0 µg/L
Bromodichloromethane	0.5	<	0.5 µg/L
Bromoform	0.5	<	0.5 µg/L
Bromomethane	2.0	<	2.0 µg/L
n-Butylbenzene	1.0	<	1.0 µg/L
sec-Butylbenzene	1.0	<	1.0 µg/L
tert-Butylbenzene	1.0	<	1.0 µg/L
Carbon tetrachloride	0.5	<	0.5 µg/L
Chlorobenzene	1.0	<	1.0 µg/L
Chloroethane	2.0	<	2.0 µg/L
Chloroform	0.5	<	0.5 µg/L
Chloromethane	2.0	<	2.0 µg/L
1,2-Chlorotoluene	1.0	<	1.0 µg/L
1,4-Chlorotoluene	1.0	<	1.0 µg/L
Dibromochloromethane	0.5	<	0.5 µg/L
1,2-Dibromo-3-Chloropropane	1.0	<	1.0 µg/L
1,2-Dibromoethane(EDB)	1.0	<	1.0 µg/L
Dibromomethane	1.0	<	1.0 µg/L
1,2-Dichlorobenzene	1.0	<	1.0 µg/L
1,3-Dichlorobenzene	1.0	<	1.0 µg/L
1,4-Dichlorobenzene	0.5	<	0.5 µg/L
Dichlorodifluoromethane	1.0	<	1.0 µg/L
1,1-Dichloroethane	1.0	<	1.0 µg/L
1,2-Dichloroethane	0.5	<	0.5 µg/L
1,1-Dichloroethylene	0.5	<	0.5 µg/L
1,2-Dichloroethylene, cis	1.0	<	1.0 µg/L
1,2-Dichloroethylene, trans	1.0	<	1.0 µg/L
Dichloromethane	1.0	<	1.0 µg/L
1,2-Dichloropropane	1.0	<	1.0 µg/L
1,3-Dichloropropane	1.0	<	1.0 µg/L
2,2-Dichloropropane	1.0	<	1.0 µg/L
1,1-Dichloropropylene	1.0	<	1.0 µg/L
1,3-Dichloropropylene, cis	1.0	<	1.0 µg/L

Continued on the following page.

**VOLATILE ORGANIC CHEMICALS—Groundwater, continued**

Site: MW-3

Lab #: 53252

Parameter	PQL		Results	
1,3-Dichloropropylene,trans	1.0	<	1.0	µg/L
Ethylbenzene	0.5	<	0.5	µg/L
Hexachlorobutadiene	1.0	<	1.0	µg/L
Isopropylbenzene	1.0	<	1.0	µg/L
1,4-Isopropyltoluene	1.0	<	1.0	µg/L
Napthalene	1.0	<	1.0	µg/L
n-Propylbenzene	1.0	<	1.0	µg/L
Styrene	1.0	<	1.0	µg/L
1,1,1,2-Tetrachloroethane	1.0	<	1.0	µg/L
1,1,2,2-Tetrachloroethane	1.0	<	1.0	µg/L
Tetrachloroethylene	1.0	<	1.0	µg/L
Toluene	1.0	<	1.0	µg/L
1,2,3-Trichlorobenzene	1.0	<	1.0	µg/L
1,2,4-Trichlorobenzene	1.0	<	1.0	µg/L
1,1,1-Trichloroethane	0.5		3.6	µg/L
1,1,2-Trichloroethane	1.0	<	1.0	µg/L
Trichloroethylene	0.5		14	µg/L
Trichlorofluoromethane	1.0	<	1.0	µg/L
1,2,3-Trichloropropane	1.0	<	1.0	µg/L
1,2,4-Trimethylbenzene	1.0	<	1.0	µg/L
1,3,5-Trimethylbenzene	1.0	<	1.0	µg/L
Vinyl chloride	0.5	<	0.5	µg/L
Total Xylenes	1.0	<	1.0	µg/L

If dilutions were required for quantitation of specific parameters, they are indicated by a (√) preceeding the result.

Surrogate Standards	Limits (%)	% Recovery
		Undil
Bromofluorobenzene	86-115	107
1,2-Dichloroethane-d4	76-114	88
Toluene - d8	88-110	100

Analyzed: 02-11-93

Analyst: ES

Method: 8260



**VOLATILE ORGANIC CHEMICALS--Groundwater**

Site: MW-4

Lab #: 53253

<b>Parameter</b>	<b>PQL</b>		<b>Results</b>	
Benzene	0.5	<	0.5	µg/L
Bromobenzene	1.0	<	1.0	µg/L
Bromochloromethane	1.0	<	1.0	µg/L
Bromodichloromethane	0.5	<	0.5	µg/L
Bromoform	0.5	<	0.5	µg/L
Bromomethane	2.0	<	2.0	µg/L
n-Butylbenzene	1.0	<	1.0	µg/L
sec-Butylbenzene	1.0	<	1.0	µg/L
tert-Butylbenzene	1.0	<	1.0	µg/L
Carbon tetrachloride	0.5	<	0.5	µg/L
Chlorobenzene	1.0	<	1.0	µg/L
Chloroethane	2.0	<	2.0	µg/L
Chloroform	0.5	<	0.5	µg/L
Chloromethane	2.0	<	2.0	µg/L
1,2-Chlorotoluene	1.0	<	1.0	µg/L
1,4-Chlorotoluene	1.0	<	1.0	µg/L
Dibromochloromethane	0.5	<	0.5	µg/L
1,2-Dibromo-3-Chloropropane	1.0	<	1.0	µg/L
1,2-Dibromoethane(EDB)	1.0	<	1.0	µg/L
Dibromomethane	1.0	<	1.0	µg/L
1,2-Dichlorobenzene	1.0	<	1.0	µg/L
1,3-Dichlorobenzene	1.0	<	1.0	µg/L
1,4-Dichlorobenzene	0.5	<	0.5	µg/L
Dichlorodifluoromethane	1.0	<	1.0	µg/L
1,1-Dichloroethane	1.0	<	1.0	µg/L
1,2-Dichloroethane	0.5	<	0.5	µg/L
1,1-Dichloroethylene	0.5	<	0.5	µg/L
1,2-Dichloroethylene, cis	1.0	<	1.0	µg/L
1,2-Dichloroethylene, trans	1.0	<	1.0	µg/L
Dichloromethane	1.0	<	1.0	µg/L
1,2-Dichloropropane	1.0	<	1.0	µg/L
1,3-Dichloropropane	1.0	<	1.0	µg/L
2,2-Dichloropropane	1.0	<	1.0	µg/L
1,1-Dichloropropylene	1.0	<	1.0	µg/L
1,3-Dichloropropylene, cis	1.0	<	1.0	µg/L

Continued on the following page.

**VOLATILE ORGANIC CHEMICALS--Groundwater, continued**

Site: MW-4

Lab #: 53253

Parameter	PQL		Results	
1,3-Dichloropropylene,trans	1.0	<	1.0	µg/L
Ethylbenzene	0.5	<	0.5	µg/L
Hexachlorobutadiene	1.0	<	1.0	µg/L
Isopropylbenzene	1.0	<	1.0	µg/L
1,4-Isopropyltoluene	1.0	<	1.0	µg/L
Napthalene	1.0	<	1.0	µg/L
n-Propylbenzene	1.0	<	1.0	µg/L
Styrene	1.0	<	1.0	µg/L
1,1,1,2-Tetrachloroethane	1.0	<	1.0	µg/L
1,1,2,2-Tetrachloroethane	1.0	<	1.0	µg/L
Tetrachloroethylene	1.0	<	1.0	µg/L
Toluene	1.0	<	1.0	µg/L
1,2,3-Trichlorobenzene	1.0	<	1.0	µg/L
1,2,4-Trichlorobenzene	1.0	<	1.0	µg/L
1,1,1-Trichloroethane	0.5	<	0.5	µg/L
1,1,2-Trichloroethane	1.0	<	1.0	µg/L
Trichloroethylene	0.5		17	µg/L
Trichlorofluoromethane	1.0	<	1.0	µg/L
1,2,3-Trichloropropane	1.0	<	1.0	µg/L
1,2,4-Trimethylbenzene	1.0	<	1.0	µg/L
1,3,5-Trimethylbenzene	1.0	<	1.0	µg/L
Vinyl chloride	0.5	<	0.5	µg/L
Total Xylenes	1.0	<	1.0	µg/L

If dilutions were required for quantitation of specific parameters, they are indicated by a (√) preceeding the result.

Surrogate Standards	% Recovery	
	Limits (%)	Undil
Bromofluorobenzene	86-115	104
1,2-Dichloroethane-d4	76-114	83
Toluene - d8	88-110	86

Analyzed: 02-11-93

Analyst: ES

Method: 8260

## REFERENCES AND DEFINITIONS OF TERMS

### **Volatile Organic Chemical (VOC) Groundwater Analysis**

Analytical Technique: Purge & Trap/GC/MS

Reference: EPA Test Methods for Evaluating Solid Waste  
SW-846, Third Edition, November 1986

**Volatile Organic Chemicals (VOC's)** are a group of natural and synthetic organic chemicals characterized by their volatility (ability to evaporate). The volatile chemicals included in this report have been selected by the EPA to be monitored both because of their suspected toxicity and because of their widespread use in industry. Many are used in the production of plastics, clothing and other common items found in most industries.

**Practical Quantitation Limits (PQL's)** represent the lower limit at which the compounds of interest can be accurately measured, at a 95% confidence level, and reported for a sample exhibiting minimal chemical background interference under the conditions employed in the analytical procedure. PQL's are by definition a function of the instrument performance for an ideal sample and thus are not adjusted for sample dilutions used to calculate results.

**Results:** Values presented in the result column represent the lowest reportable value for a parameter after correcting for all sample dilutions.

**1µg/L** = 1 microgram per liter (ug/L) = 1 part per billion

**< = "less than".** This number is the lowest reportable value by the procedure used for analysis.

# John C. Wallace, Inc.

*Environmental Consultant*

1215 Whitehall Drive

South Bend, Indiana 46615

Telephone 219-233-7141

August 21, 1991

Attn. Mr. Howard Tomlinson  
Anco Products  
2500 S. 17th St.  
Elkhart, IN

RE: Assessment for Risk Evaluation.  
Gemeinhardt, Bock, and Lusher Sites

Dear Howard:

I am pleased to submit three (3) copies of this report for an assessment for risk evaluation at Anco Products, 2500 S. Seventeenth Street, Elkhart, Indiana, hereinafter referred to as project site.

## Background.

The original intent of the site assessment conducted at the project site was to determine the impact, if any, that activities conducted during manufacturing processes, past and present, have had on the environment. This assessment was started by CHES Consultants and documents were released May 12, 1989; Preliminary Assessment, June 20, 1989; sample results and meeting with NBD representative.

During the time of the original assessment two underground storage tanks (USTs) were discovered. It was also discovered that a significant build up of waste material from the manufacturing processes, was known to exist at the base of the dust collection unit. Actions were taken to provide temporary closure of USTs till a formal site assessment for UST closure could be achieved. A system of monitor wells were installed as part of the assessment, to understand the subsurface condition of the project site related to The USTs and the dust collection unit.

Monitor wells were installed in a manner consistent with the inferred groundwater flow, depicted in the Indiana Department of Natural Resource (IDNR) document; St. Joseph River Basin, Water Resource Assessment 87-1. Parameters for analysis were decided upon as related to the products stored in the USTs and the material related to the dust collection unit (acetone, toluene, formaldehyde, phenols).

Samples were taken from the monitor wells in December of 1990 and again in January of 1991. The intent of the samples taken was to provide assessment data for the closure of the USTs. For the purpose of closure, it was only necessary to be concerned with the contents of the USTs (acetone and toluene). EPA Method 601/02 were the parameters requested for the analysis. This method is considered a solvent scan.

**Assessment Update  
August 21, 1991**

It was on receipt of the results for the analysis of the December samples that we learned of trichloroethylene (TCE) being present in the groundwater. Our findings were then confirmed through a second round of sampling, January 24, 1991. The analytical results were received February 1, 1991.

At that time it was decided by Anco Products and John C. Wallace, Inc., that closure of the USTs was of major concern. Dyhydro Analytical Services of Wayne, Michigan, who has provided analytical services throughout the project, agreed to enclose analysis data for compounds; acetone and toluene under a separate letter to be included with closure information, submitted to the Indiana Department of Environmental Management. Closure was achieved through submission of the February 20, 1991 document submitted by John C. Wallace, Inc. and Anco Products.

The findings hereunder are limited to findings of fact and not as to the applicability of the statute for the particular matter, for all such legal opinions advise of legal counsel should be obtained. John C. Wallace, Inc. approaches the legal issues from the point of view of the informed layman.

**Gemeinhardt, Bock Industries and Lusher St.**

Companies; Gemeinhardt and Bock Industries and the Lusher Street Groundwater Contamination Site, have long been on the state list of Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) properties for Elkhart County. The contamination associated with these sites is TCE. What makes the information for these sites even more confusing, is that the Gemeinhardt property is the only site with a known source for the TCE contamination. There has been much speculation that the origin for the contamination in all three sites has originated at the Gemeinhardt Site.

Gemeinhardt, has in the past, used an injection well for much of the water type waste disposal including degreasing type solvents; TCE. Gemeinhardt took the injection well out of service prior to 1984. Hazardous waste was banned in December of 1984, in a system like the one for the Gemeinhardt site (40 Code of Federal Regulations 144). However, considerable contamination was thought to of originated from the usage. It was also learned, by the IDEM, that the injection well was continually used after it had been thought to be out of service.

In April of 1983 a Consent Decree was issued for violations concerning a known contamination found at the Gemeinhardt location. The order was impart, to refund money to the state for water services provided to area residents and businesses, in the form of water main extension, water hook ups and bottled water for interim periods. The Decree also stated

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**August 21, 1991**

that an investigation and remedial techniques were to be investigated and decided upon with cooperation with the state agency (IDEM).

In 1984 it was estimated that the contamination extended north, northwest for a distance of one mile. Which included the Bock Industries location. Poor housekeeping practices were observed at the Bock Industries site, and it was also found that TCE was used at this location.

In 1987, Honey RV, Hively Street, contamination was discovered at levels for TCE; 10 ppb. By this time ENSR, a firm from Boston Massachusetts, had begun work as the environmental engineer for Gemeinhardt. As many as sixteen nested monitor wells were placed at various locations throughout the area. Groundwater modeling was completed using these well locations. Attached you will find a map depicting the model of the presumed plume released in a document from ENSR, 1988.

Also in 1987, the Elkhart County Health Department began work on the Lusher Street Project. Again TCE was the main contaminant found. A sixteen block radius was established using Leininger Street, SR 19, 18th Street and Lusher Street as boundaries. It was established that 34% of the wells sampled were contaminated by TCE. The contaminated area included a portion of 17th Street, in that a residential well at 2205 17th was found to have TCE at levels above maximum contamination level (MCL) for drinking water. Again, it appears that the immediate action provided by the state and county was to provide hook up and access to public water. A source for the contamination was never established.

### Discussion

While it is consistent, with what is known on the conditions of the local environment, to believe that contamination discovered at the Anco property is a result of impact from offsite sources, it is not easy to determine the exact source, or the direction from which the contamination is coming from. There are several possibilities for sources that can be discussed. The most obvious source, and most likely the major source, being that of the Gemeinhardt site. Inferred groundwater flow for the area is depicted in informational sources (USGS topographical maps, IDNR studies) as being north, northwest. For the most part, engineers for ENSR, the firm conducting surveys for Gemeinhardt, have concluded that groundwater flow is consistent at north, northwest. You will notice that a large portion of the plume, as described in the attached map of model results prepared by ENSR, has moved eastward, and apparently the plume has even backed up (Area of nest 2). This is still a model, and is only presumed to be accurate.

There are, of course, inconsistencies within the makeup of subsurface conditions in the soil. These inconsistencies would allow for groundwater to be influenced in different directions. Although the aquifer in the area consists largely of sand and gravel, which allow for groundwater to flow somewhat freely, there are areas of silt and clay. In much of the area within the St. Joseph River there are two

aquifers, an upper unconfined and a lower confined aquifer. These two aquifers are separated by a silt and clay bed. Information suggests that these aquifers are highly transmissive and intersect.

There are other influences on groundwater flow, such as; rivers, creeks, surface water and areas which recharge the aquifer. These do not seem to be prevalent in the immediate area, however, a substantial rise in water levels of nearly two feet were detected during sampling procedures conducted during December 1990, and may of caused additional movement and surface water influence.

It seems the most interesting diversion to the surface and subsurface water flow may be man made. The sewer line runs along Leininger Street. This may allow for water to move along the sewer route, indicating that the source for contamination may be unidentified at present.

#### Impaired Value

According to a recent publication of the Focus Bulletin published by the Hazardous Materials Institute, Findlay, Ohio, it is estimated that 10% to 40% of commercial properties, and 50% to 90% of industrial properties are "significantly contaminated." "Significantly contaminated" does not imply that the property is not useful or productive. Many "significantly contaminated" properties are probably best left that way and used in a reasonably normal fashion, taking proper precautions. In general, the least risk to



human health and the environment tends to result from the implementation of a long-term management and control programs to govern the risk. This approach to dealing with the presence of environmental risks is wholly consistent with published policies and practices of the government agencies. However, negative environmental impact, such as the impact detected at the property for Anco Products does leave a sense of possible impaired value.

A text book definition of environmentally impaired value would be;

Impaired Value = unimpaired value - stigma - cost to control.

The stigma associated with owning a piece of property such as the Anco property, may only be felt during the time of transfer. Stigma may be viewed as a marketplace reaction to uncertainty. The dollar amount for stigmas associated with properties seem to change periodically. The level of knowledge about the risk source in terms of quantitative information on the amount, location, and methods for dealing with the contaminate, with increasing knowledge decreasing the stigma factor. The contaminant (TCE) itself is considered persistent, and the fact that it is considered a carcinogen, as opposed to a familiar toxin, increases the stigma.

Cost to control/cost to cure, so far, has been more of a sampling and monitoring cost, with review of information as it becomes available from sources such as the Indiana

Department of Environmental Management and the Elkhart County Health Department. The amount of liability for costs is a legal question, and advise of legal counsel should be obtained. The amount of contamination in the area, and number of possible sources, as outlined above, make it increasingly difficult to establish an exact source.

Recommendations.

Continual sampling of the monitor wells has been agreed on previously, and may be appropriate at present. There are several approaches for more definitive answers for establishing the source of contamination. They may not be cost effective or even conclusive, but deserve consideration.

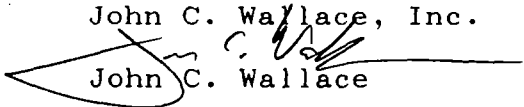
1. The information available at the state offices concerning Gemeinhardt and Bock has been updated since the report released in 1988. This information is available for review at the Indianapolis location for the IDEM. This may be done at a minimal cost.
2. The monitor wells in existence at Anco Products are singularly set for the depth of groundwater. TCE is not a floater. A nest of wells at different depths, should give a more accurate profile as to the extent of contamination.
3. A survey of the monitor wells would give an accurate depiction as to the slope and direction of groundwater flow.

*Assessment Update  
August 21, 1991*

Thank you for allowing us to provide for your environmental concerns. Should there be any questions regarding the information contained herein, or if a cost estimate is desired for the above recommendations, please do not hesitate to contact my office at your earliest convenience.

Very truly yours,

John C. Wallace, Inc.



John C. Wallace

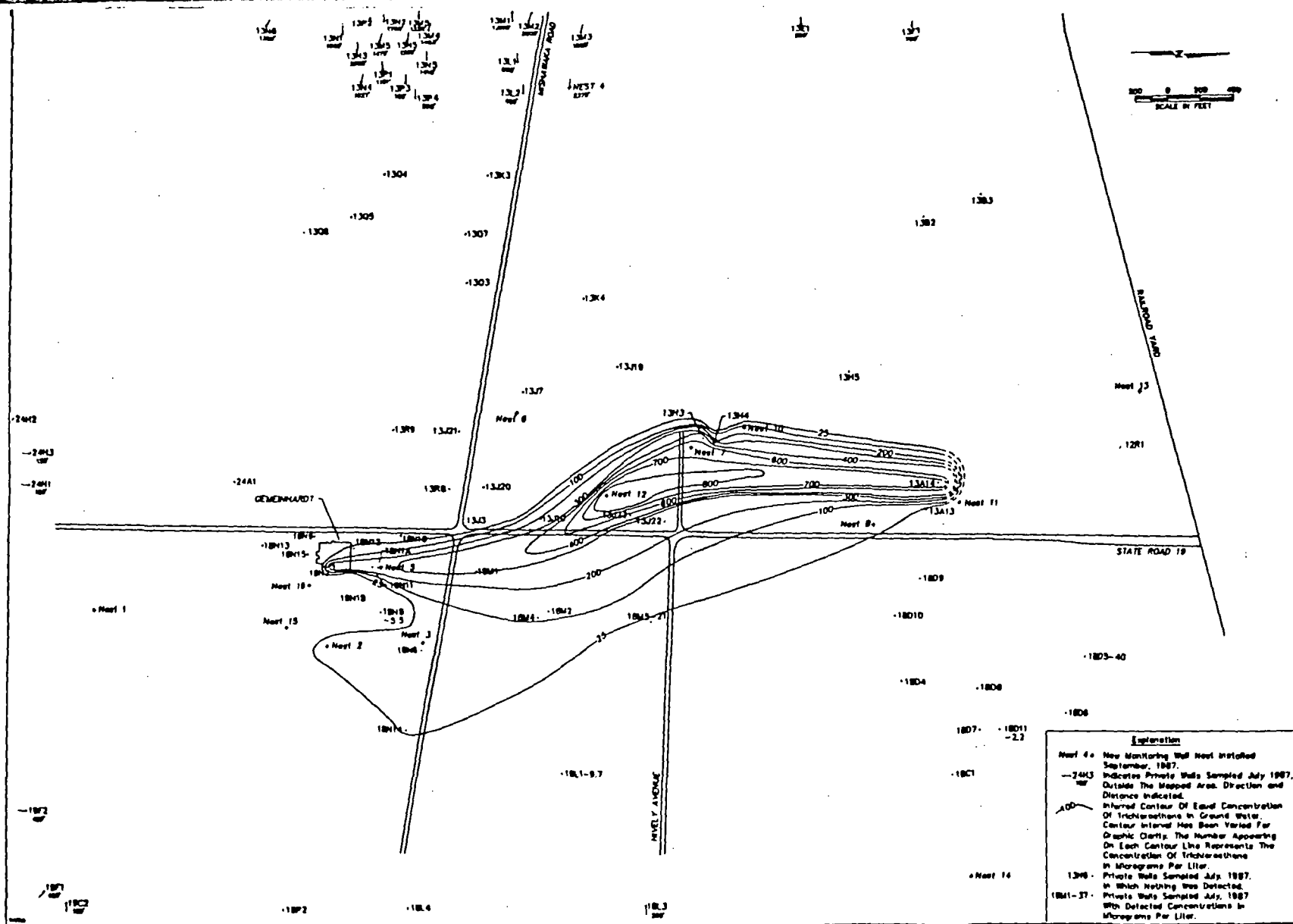


Figure 4-14

Areal Distribution of Trichloroethene from February, 1988 Sampling of New Monitoring Well

### Information Sources

Department of Environmental Management, Office of Solid Waste Management and Hazardous Waste Management, Site Investigation Section, CERCLIS Sites.

Indiana Department of Environmental Management, 5500 Bradbury Street, Indianapolis, Indiana (spill files).

Indiana Department of Environmental Management, Underground Storage Tank Program, 2321 Executive Drive, Indianapolis, Indiana.

Environmental Protection Agency, National Priority List, BNA Publications, National Contingency Section.

Guidance on landowner Liability under Section 107(a)(1) of CERCLA, and Settlements with Prospective Purchasers of Contaminated Property: MEMORANDUM; June 6, 1989; USEPA.

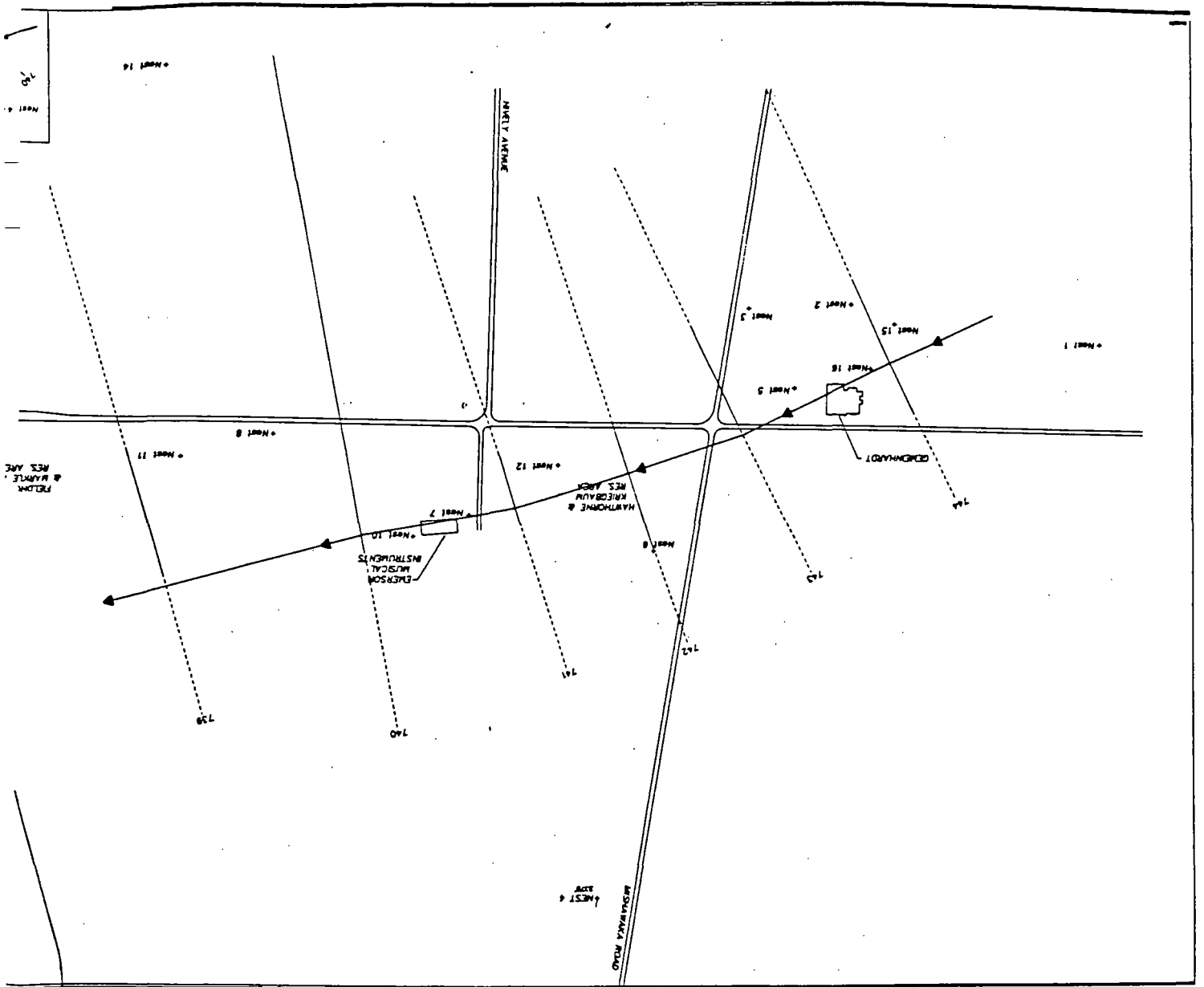
FOCUS "The Bulletin of Environmental Risk Evaluation and Management" Published for Hazardous Materials Institute, Inc., Columbus Ohio.

Hydrologic and Chemical Evaluation of the Groundwater Resources of Northern Elkhart, Investigations 81-53; October 1981.

Anco Assessment Documents, CHES Consultants; released May 12, 1989; Preliminary Assessment, June 20, 1989; sample results, and John C. Wallace, Inc.; released February 20 1990; UST Closure, July 19, 1991; Sharing of Information Notice, Mr. Harry Ackerman, Indiana Department of Environmental Management.

#### MAPS:

United States Department of the Interior Geological Survey, Eastern Elkhart Quadrangle (Topographical).



# John C. Wallace, Inc.

*Environmental Consultant*

1215 Whitehall Drive

South Bend, Indiana 46615

Telephone 219-233-7141

July 24, 1991

Attn. Mr. Harry Ackerson  
IDEM  
Site Investigation Section  
105 S. Meridian  
Indianapolis, IN 46206-6013

RE: Information Sharing  
CERCLIS Sites;  
Gemeinhardt and Bock Industries  
Elkhart County  
Elkhart, Indiana

Dear Mr. Ackerson:

As stated during our phone conversation, July 17, 1991, certain information is available from four monitor wells at a property within approximately 1/4 mile of the area of the above mentioned CERCLIS Sites.

Anco Products, Inc., 2500 S. Seventeenth St., Elkhart, Indiana, is in the business of manufacturing insulated ducting. As part of a business program, unrelated to the concerns addressed in this writing, an environmental property assessment was conducted. Part of the assessment called for the installation of four (4) monitor wells. The monitor wells were placed in manner that would allow a subsurface investigation of the groundwater as it moved on-site (upgradient), and the impact, if any, that the manufacturing processes conducted at Anco Products would have.

In addition to sampling and analysis completed for compounds related to the manufacturing processes conducted at Anco Products, a solvent scan or method 601/02, were parameters also included in the analysis, in part, to determine the impact from adjacent and area manufacturing businesses. Anco Products, became aware of potential contamination during previous investigations of the CERCLIS Sites mentioned above and the Lusher Street investigation. Anco Products, Incorporated has never used Trichloroethylene (TCE) in their manufacturing processes, and asks that you assist them in determining the source and /or the responsible party.

You stated during our phone conversation that it is not uncommon to find TCE in the groundwater in the area. Anco Products, however, is quite concerned as to the impact that local businesses have had on the groundwater, and hopes that the sharing of this information will assist the IDEM in their investigation.

Enclosed you will find; well logs, results of sampling and analysis, and a site map (sketch) depicting monitor well placement.

Thank you for your time and consideration in this matter. If there are any questions regarding the information contained herein, please do not hesitate to contact my office at; 219, 233-7141.

Very truly yours,

John C. Wallace, Inc.

A handwritten signature in dark ink, appearing to read "John C. Wallace", with a long horizontal flourish extending to the right.

John C. Wallace

Enclosures.





EXHIBIT C  
2410 Weaver Rd.  
Niles, MI 49120  
816-684-6269

BORING NO. Well #2 SHEET 2 OF 4  
PROJECT ANCO LOCATION ELKHART Ind  
JOB NO. ANCO DATE COMPLETED June 7 89 WEATHER Sunny HOT  
SURFACE ELEVATION \_\_\_\_\_ WATER DEPTH @ COMPLETION 14.5 15.3 T-Well AFTER 24 HRS. \_\_\_\_\_

## FIELD BORING LOG

[illegible]

FIG NO 2me79

LOGGED BY Don Martindale

EXHIBIT C  
2410 Weaver Rd.  
Niles, MI 49120  
616-684-6269

BOHRING NO. Well #3 SHEET 3 of 4

PROJECT ANCO LOCATION ELKHART IND

JOB NO. ANCO DATE COMPLETED June 7 85 WEATHER Sunny HOT

SURFACE ELEVATION \_\_\_\_\_ WATER DEPTH @ COMPLETION 141.0 AFTER 24 HRS. \_\_\_\_\_

## FIELD BORING LOG

DEPTH (From - To)	METHOD	SAMPLE NO.	RECOV. ERY	SAMPLE INTERVAL	PENETRATION IN BLOW COUNT				DESCRIPTION, REMARKS, ETC.
					1	2	3	4	
0.0 - 0.7	SS	1	18'	0.0-1.5	2	2	2		STANDY TOP SOIL
0.7 - 3.4	"	2	"	4.5-6.0	2	2	3		LOOSE DEN BR Pine-med Sand
3.4 - 7.9	"	3	"	9.0-10.5	3	4	5		LOOSE DEN Pine-med Sand
7.9 - 14.0	"	4	"	15.5-15.0	4	4	5		LOOSE LHT DEN Pine sand
14.0 - 16.0									LOOSE BAIL MED-COARSE SAND - 7' also
				ASGARD TO 23.0					EOB 23.0
				Set with Sencor					14.0 - 23.0

FIG NO 2125

LOGGED BY

EXHIBIT C  
2410 Weaver Rd.  
Niles, MI 49120  
616-684-6269

SHEET 4 OF 4

LOCATION ELKHART Ind

WEATHER Sunny HOT!

**AFTER 24 HRS**

## FIELD BORING LOG

[illegible]

Alan Martindale

Sample description - Anco 1  
Anco tank assessment

Sample ID = 90-12-80-1


Parameter: Purgeables(601/02)

Matrix: Water

Date analyzed: December 17, 1990

Method: Purge & Trap

Compound	Concentration ug/l	Detection Limit ug/l
Dichlorodifluoromethane	ND	< 1.0
Chloromethane	ND	< 2.0
Vinyl chloride	ND	< 2.0
Chloroethane	ND	< 2.0
Bromoethane	ND	< 1.5
1,1-Dichloroethene	ND	< 0.4
Methylene chloride	ND	< 2.0
t-1,2-Dichloroethene	ND	< 0.2
1,1-Dichloroethane	ND	< 0.3
c-1,2-Dichloroethene	ND	< 0.2
Chloroform	ND	< 1.0
1,1,1-Trichloroethane	2.6	< 0.2
Carbon tetrachloride	ND	< 0.2
Benzene	ND	< 0.4
1,2-Dichloroethane	ND	< 0.2
Trichloroethene	8.9	< 0.5
1,2-Dichloropropane	ND	< 1.0
Bromodichloromethane	ND	< 0.5
2-Chloroethylvinyl ether	ND	< 0.5
t-1,3-Dichloropropene	ND	< 1.0
Toluene	ND	< 0.2
c-1,3-Dichloropropene	ND	< 1.0
1,1,2-Trichloroethane	ND	< 1.0
Tetrachloroethene	ND	< 1.0
Dibromochloromethane	ND	< 1.0
Chlorobenzene	ND	< 0.2
Ethylbenzene	ND	< 0.2
m+p-Xylene	ND	< 0.2
o-Xylene	ND	< 0.2
Bromoform	ND	< 0.9
1,1,2,2-Tetrachloroethane	ND	< 0.7
1,3-Dichlorobenzene	ND	< 0.4
1,4-Dichlorobenzene	ND	< 0.4
1,2-Dichlorobenzene	ND	< 0.4

  
Analyst: R. S. Lynch

**DIHYDRO ANALYTICAL SERVICES**

Dihydro Analytical Services, 4455 Fletcher, Wayne, MI, (313) 595-0335

AD-1000-01 DIHYDRO  
\*\*\*\*\*

Sample description - Anco 2  
Anco tank assessment

Sample ID = 90-12-80-2

Parameter: Purgeables(601/02)

Date analyzed: December 17, 1990

Matrix: Water

Method: Purge & Trap

Compound	Concentration ug/l	Detection Limit ug/l
Dichlorodifluoromethane	ND	< 1.0
Chloromethane	ND	< 2.0
Vinyl chloride	ND	< 2.0
Chloroethane	ND	< 2.0
Bromoethane	ND	< 1.5
1,1-Dichloroethene	ND	< 0.4
Methylene chloride	ND	< 2.0
t-1,2-Dichloroethene	ND	< 0.2
1,1-Dichloroethane	ND	< 0.3
c-1,2-Dichloroethene	ND	< 0.2
Chloroform	ND	< 1.0
1,1,1-Trichloroethane	4.7	< 0.2
Carbon tetrachloride	ND	< 0.2
Benzene	ND	< 0.4
1,2-Dichloroethane	ND	< 0.2
Trichloroethene	6.9	< 0.5
1,2-Dichloropropane	ND	< 1.0
Bromodichloromethane	ND	< 0.5
2-Chloroethylvinyl ether	ND	< 0.5
t-1,3-Dichloropropene	ND	< 1.0
Toluene	ND	< 0.2
c-1,3-Dichloropropene	ND	< 1.0
1,1,2-Trichloroethane	ND	< 1.0
Tetrachloroethene	ND	< 1.0
Dibromochloromethane	ND	< 1.0
Chlorobenzene	ND	< 0.2
Ethylbenzene	ND	< 0.2
m+p-Xylene	ND	< 0.2
o-Xylene	ND	< 0.2
Bromoform	ND	< 0.9
1,1,2,2-Tetrachloroethane	ND	< 0.7
1,3-Dichlorobenzene	ND	< 0.4
1,4-Dichlorobenzene	ND	< 0.4
1,2-Dichlorobenzene	ND	< 0.4



Analyst: R. S. Lynch

**DIHYDRO ANALYTICAL SERVICES**

Dihydro Analytical Services, 4455 Fletcher, Wayne, MI, (313) 595-0335

A Division of **DIHYDRO**

Sample description - Anco 3  
Anco tank assessment

Sample ID = 90-12-80-3

Parameter: Purgeables(601/02)

Date analyzed: December 17, 1990

Matrix: Water

Method: Purge & Trap

Compound	Concentration ug/l	Detection Limit ug/l
Dichlorodifluoromethane	ND	< 1.0
Chloromethane	ND	< 2.0
Vinyl chloride	ND	< 2.0
Chloroethane	ND	< 2.0
Bromoethane	ND	< 1.5
1,1-Dichloroethene	ND	< 0.4
Methylene chloride	ND	< 2.0
t-1,2-Dichloroethene	ND	< 0.2
1,1-Dichloroethane	ND	< 0.3
c-1,2-Dichloroethene	ND	< 0.2
Chloroform	ND	< 1.0
1,1,1-Trichloroethane	ND	< 0.2
Carbon tetrachloride	ND	< 0.2
Benzene	ND	< 0.4
1,2-Dichloroethane	ND	< 0.2
Trichloroethene	81	< 0.5
1,2-Dichloropropane	ND	< 1.0
Bromodichloromethane	ND	< 0.5
2-Chloroethylvinyl ether	ND	< 0.5
t-1,3-Dichloropropene	ND	< 1.0
Toluene	ND	< 0.2
c-1,3-Dichloropropene	ND	< 1.0
1,1,2-Trichloroethane	ND	< 1.0
Tetrachloroethene	ND	< 1.0
Dibromochloromethane	ND	< 1.0
Chlorobenzene	ND	< 0.2
Ethylbenzene	ND	< 0.2
m+p-Xylene	ND	< 0.2
o-Xylene	ND	< 0.2
Bromoform	ND	< 0.9
1,1,2,2-Tetrachloroethane	ND	< 0.7
1,3-Dichlorobenzene	ND	< 0.4
1,4-Dichlorobenzene	ND	< 0.4
1,2-Dichlorobenzene	ND	< 0.4

  
Analyst: R. S. Lynch

**DIHYDRO ANALYTICAL SERVICES**

Dihydro Analytical Services, 4455 Fletcher Wayne, MI, (313) 595-0335

A Division of **DIHYDRO**

Sample description - Anco 4  
Anco tank assessment

Sample ID = 90-12-80-4

Parameter: Purgeables(601/02)

Date analyzed: December 17, 1990

Matrix: Water

Method: Purge & Trap

Compound	Concentration	Detection	Limit
	ug/l		ug/l
Dichlorodifluoromethane	ND	<	1.0
Chloromethane	ND	<	2.0
Vinyl chloride	ND	<	2.0
Chloroethane	ND	<	2.0
Bromoethane	ND	<	1.5
1,1-Dichloroethene	ND	<	0.4
Methylene chloride	ND	<	2.0
t-1,2-Dichloroethene	ND	<	0.2
1,1-Dichloroethane	ND	<	0.3
c-1,2-Dichloroethene	ND	<	0.2
Chloroform	ND	<	1.0
1,1,1-Trichloroethane	ND	<	0.2
Carbon tetrachloride	ND	<	0.2
Benzene	ND	<	0.4
1,2-Dichloroethane	ND	<	0.2
Trichloroethene	22	<	0.5
1,2-Dichloropropane	ND	<	1.0
Bromodichloromethane	ND	<	0.5
2-Chloroethylvinyl ether	ND	<	0.5
t-1,3-Dichloropropene	ND	<	1.0
Toluene	ND	<	0.2
c-1,3-Dichloropropene	ND	<	1.0
1,1,2-Trichloroethane	ND	<	1.0
Tetrachloroethene	ND	<	1.0
Dibromochloromethane	ND	<	1.0
Chlorobenzene	ND	<	0.2
Ethylbenzene	ND	<	0.2
m+p-Xylene	ND	<	0.2
o-Xylene	ND	<	0.2
Bromoform	ND	<	0.9
1,1,2,2-Tetrachloroethane	ND	<	0.7
1,3-Dichlorobenzene	ND	<	0.4
1,4-Dichlorobenzene	ND	<	0.4
1,2-Dichlorobenzene	ND	<	0.4

Analyst: R. S. Lynch

**DIHYDRO ANALYTICAL SERVICES**

Dihydro Analytical Services, 4455 Fletcher, Wayne, MI, (313) 595-0335

AD Division **DIHYDRO**  
ANALYTICAL



Sample description - Method standard  
90-12-39/-43/-64/-80/-98

SAMPLE ID = MSpike

Parameter: PURGEABLES(601&2)

Date analyzed: 12-17-90

Matrix: Water

Analyst: rsl

Compound	Mean ug/l	Spike ug/l	True Spike ug/l	% Recovery
Methylene chloride	0.0	25.1	21.2	118.6
1,1-Dichloroethane	0.0	24.5	21.8	112.3
Chloroform	0.0	24.8	23.0	107.8
1,1,1-Trichloroethane	0.0	24.4	23.1	105.6
1,2-Dichloroethane	0.0	26.8	22.6	118.7
Trichloroethene	0.0	25.3	25.6	98.8
1,2-Dichloropropane	0.0	22.1	22.5	98.4
Toluene	0.0	23.2	21.0	110.7
1,1,2-Trichloroethane	0.0	24.3	24.4	99.6
Tetrachloroethene	0.0	30.9	32.2	96.0
Chlorobenzene	0.0	18.5	22.5	82.4
Ethylbenzene	0.0	20.7	22.1	93.5
m+p-Xylene	0.0	20.5	21.2	96.8
o-Xylene	0.0	19.4	22.4	86.8
1,1,2,2-Tetrachloroethane	0.0	19.8	21.8	90.8
1,3-Dichlorobenzene	0.0	18.3	22.4	81.9
1,4-Dichlorobenzene	0.0	28.5	27.3	104.3
1,2-Dichlorobenzene	0.0	21.3	23.1	92.2

Sample description - Anco-1A MW-1  
Anco tank assessment

Sample ID = 91-01-148-1

Parameter: Purgeables(601/02)

Date analyzed: January 25, 1991

Matrix: Water

Method: Purge & Trap

Compound	Concentration ug/l	Detection Limit ug/l
Dichlorodifluoromethane	ND	< 1.0
Chloromethane	ND	< 2.0
Vinyl chloride	ND	< 2.0
Chloroethane	ND	< 2.0
Bromoethane	ND	< 1.5
1,1-Dichloroethene	ND	< 0.4
Methylene chloride	ND	< 2.0
t-1,2-Dichloroethene	ND	< 0.2
1,1-Dichloroethane	ND	< 0.3
c-1,2-Dichloroethene	ND	< 0.2
Chloroform	ND	< 1.0
1,1,1-Trichloroethane	4.8	< 0.2
Carbon tetrachloride	ND	< 0.2
Benzene	ND	< 0.4
1,2-Dichloroethane	ND	< 0.2
Trichloroethene	16	< 0.5
1,2-Dichloropropane	ND	< 1.0
Bromodichloromethane	ND	< 0.5
2-Chloroethylvinyl ether	ND	< 0.5
t-1,3-Dichloropropene	ND	< 1.0
Toluene	ND	< 0.2
c-1,3-Dichloropropene	ND	< 1.0
1,1,2-Trichloroethane	ND	< 1.0
Tetrachloroethene	ND	< 1.0
Dibromochloromethane	ND	< 1.0
Chlorobenzene	ND	< 0.2
Ethylbenzene	ND	< 0.2
m+p-Xylene	ND	< 0.2
o-Xylene	ND	< 0.2
Bromoform	ND	< 0.9
1,1,2,2-Tetrachloroethane	ND	< 0.7
1,3-Dichlorobenzene	ND	< 0.4
1,4-Dichlorobenzene	ND	< 0.4
1,2-Dichlorobenzene	ND	< 0.4

  
Analyst: R. S. Lynch

**DIHYDRO ANALYTICAL SERVICES**

Dihydro Analytical Services, 4455 Fletcher, Wayne, MI, (313) 595-0335

4555 Fletcher  
**DIHYDRO**  
ANALYTICAL SERVICES

Sample description - Anco-2A MW-2  
Anco tank assessment

Sample ID = 91-01-148-2

Parameter: Purgeables(601/02)

Date analyzed: January 25, 1991

Matrix: Water

Method: Purge & Trap

Compound	Concentration ug/l	Detection Limit ug/l
Dichlorodifluoromethane	ND	< 1.0
Chloromethane	ND	< 2.0
Vinyl chloride	ND	< 2.0
Chloroethane	ND	< 2.0
Bromoethane	ND	< 1.5
1,1-Dichloroethene	ND	< 0.4
Methylene chloride	ND	< 2.0
t-1,2-Dichloroethene	ND	< 0.2
1,1-Dichloroethane	ND	< 0.3
c-1,2-Dichloroethene	ND	< 0.2
Chloroform	ND	< 1.0
1,1,1-Trichloroethane	6.0	< 0.2
Carbon tetrachloride	ND	< 0.2
Benzene	ND	< 0.4
1,2-Dichloroethane	ND	< 0.2
Trichloroethene	9.1	< 0.5
1,2-Dichloropropane	ND	< 1.0
Bromodichloromethane	ND	< 0.5
2-Chloroethylvinyl ether	ND	< 0.5
t-1,3-Dichloropropene	ND	< 1.0
Toluene	ND	< 0.2
c-1,3-Dichloropropene	ND	< 1.0
1,1,2-Trichloroethane	ND	< 1.0
Tetrachloroethene	1.1	< 1.0
Dibromochloromethane	ND	< 1.0
Chlorobenzene	ND	< 0.2
Ethylbenzene	ND	< 0.2
m+p-Xylene	ND	< 0.2
o-Xylene	ND	< 0.2
Bromoform	ND	< 0.9
1,1,2,2-Tetrachloroethane	ND	< 0.7
1,3-Dichlorobenzene	ND	< 0.4
1,4-Dichlorobenzene	ND	< 0.4
1,2-Dichlorobenzene	ND	< 0.4

  
Analyst: R. S. Lynch

**DIHYDRO ANALYTICAL SERVICES**

Dihydro Analytical Services, 4455 Fletcher, Wayne, MI. (313) 595-0335

AD-1000 DIHYDRO  
ANALYTICAL

Sample description - Anco 4A MW-4  
Anco tank assessment

Sample ID = 91-01-148A-4

Parameter: Purgeables(601/02)

Matrix: Water

Date analyzed: February 18, 1991

Method: Purge & Trap

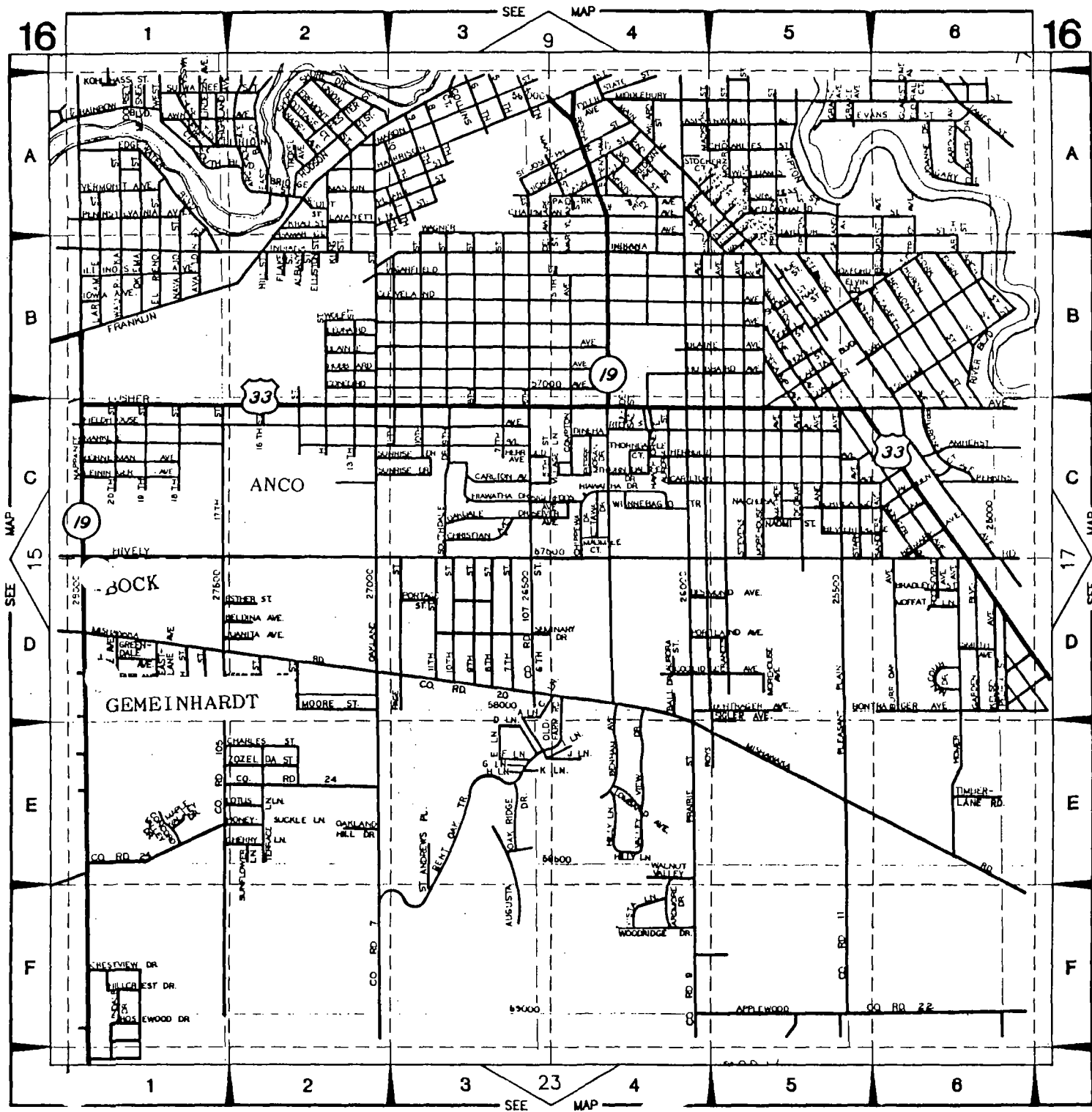
Compound	Concentration ug/l	Detection Limit ug/l
Dichlorodifluoromethane	ND	< 1.0
Chloromethane	ND	< 2.0
Vinyl chloride	ND	< 2.0
Chloroethane	ND	< 2.0
Bromoethane	ND	< 1.5
1,1-Dichloroethene	ND	< 0.4
Methylene chloride	ND	< 2.0
t-1,2-Dichloroethene	ND	< 0.2
1,1-Dichloroethane	ND	< 0.3
c-1,2-Dichloroethene	ND	< 0.2
Chloroform	ND	< 1.0
1,1,1-Trichloroethane	ND	< 0.2
Carbon tetrachloride	ND	< 0.2
Benzene	ND	< 0.4
1,2-Dichloroethane	ND	< 0.2
Trichloroethene	21	< 0.5
1,2-Dichloropropane	ND	< 1.0
Bromodichloromethane	ND	< 0.5
2-Chloroethylvinyl ether	ND	< 0.5
t-1,3-Dichloropropene	ND	< 1.0
Toluene	ND	< 0.2
c-1,3-Dichloropropene	ND	< 1.0
1,1,2-Trichloroethane	ND	< 1.0
Tetrachloroethene	ND	< 1.0
Dibromochloromethane	ND	< 1.0
Chlorobenzene	ND	< 0.2
Ethylbenzene	ND	< 0.2
m+p-Xylene	ND	< 0.2
o-Xylene	ND	< 0.2
Bromoform	ND	< 0.9
1,1,2,2-Tetrachloroethane	ND	< 0.7
1,3-Dichlorobenzene	ND	< 0.4
1,4-Dichlorobenzene	ND	< 0.4
1,2-Dichlorobenzene	ND	< 0.4

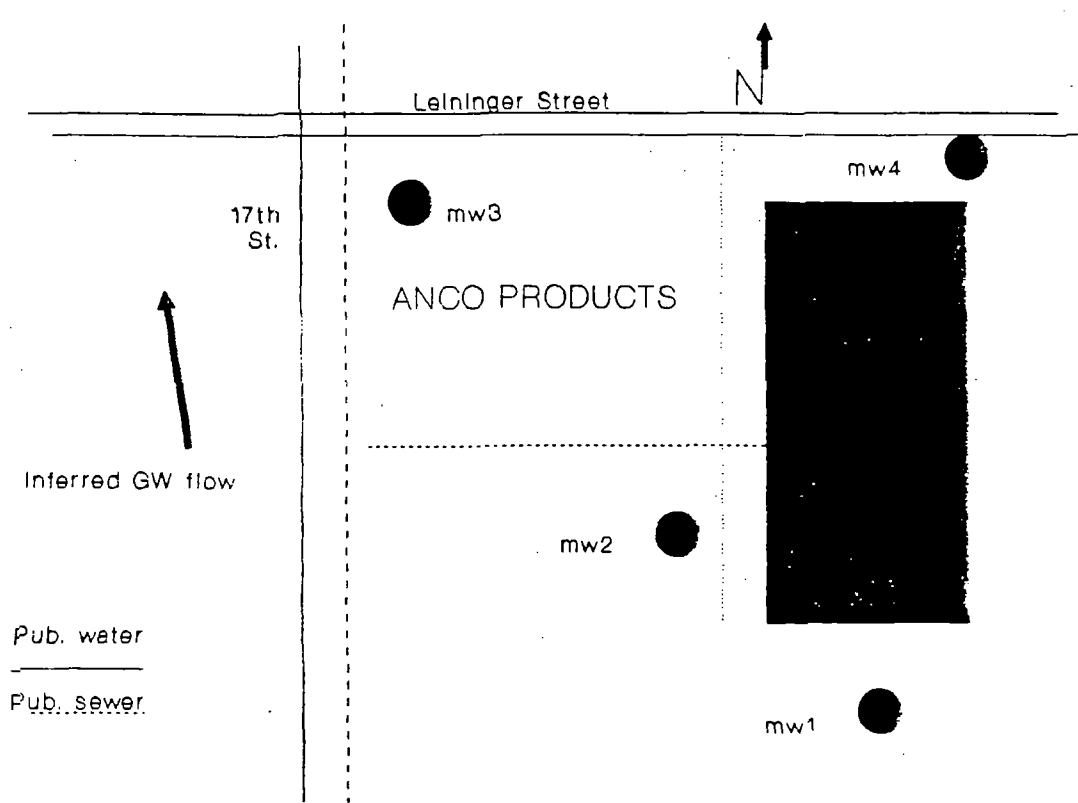
  
Analyst: R. S. Lynch

## DIHYDRO ANALYTICAL SERVICES

Dihydro Analytical Services, 4455 Fletcher, Wayne, MI, (313) 595-0335

A Division of DIHYDRO





Leininger Street



17th  
St.

mw3

mw4

ANCO PRODUCTS

mw2

mw1

Inferred GW flow

Pub. water

Pub. sewer



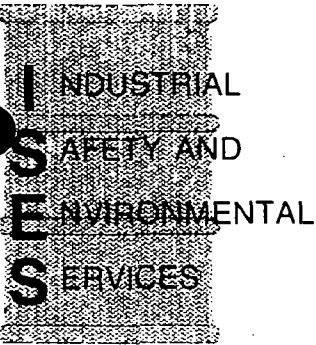
**Anco Products, Incorporated  
2500 South 17th Street  
Elkhart, Indiana**

**Continuing Investigation Report**

**As Prepared By:**

***Industrial Safety and Environmental Services*  
716 Lincolnway West  
Osceola, Indiana 46561**





P.O. BOX 233 • OSCEOLA, IN 46561 • PHONE: (219) 259-4138

---

Mr. Howard Tomlinson  
President  
Anco Products, Incorporated  
2500 South 17th Street  
Elkhart, Indiana 46517

May 28, 1993

**Re: Amended Report**

Dear Howard,

Per request of Mr. Donn Wray, Plews & Shadley, 1346 North Delaware Street, Indianapolis, Indiana, enclosed you will find a copy of the amended "Continuing Investigation Report". The changes which Mr. Wray requested were specifically dealing with the section pertaining to how TCE usage was discovered.

I appreciate the input from Mr. Wray, and will be forwarding two (2) original copies to him, as well as one (1) original copy to you. It is my understanding that he will be forwarding a copy to the Indiana Department of Environmental Management for their records.

Should you or any reviewers of the amended report have additional questions, please feel free to contact me at your earliest convenience.

Very Truly Yours,

Tris O. Gour

Industrial Safety and Environmental Services

TOG/mkn

**Enclosure**

cc: Mr. Donn Wray, Plews & Shadley, w/enclosures

## **I. Introduction**

Industrial Safety and Environmental Services (ISES) is retained by Anco Products, Incorporated, 2500 South 17th Street, Elkhart, Indiana, (Project Site) to assess current groundwater conditions. As part of this assessment, a groundwater investigation was conducted during February and March 1993. In addition, review of findings from previous investigations conducted at the project site were also reexamined in order to provide for more thorough final documentation. In cases where previous reports prove beneficial to interpretation, they have been included as appendix's of this document. This report presents the findings as of February and March 1993.

## **II. Site Background**

The current building located at 2500 South 17th Street, Elkhart, Indiana, was built on or about 1960. The purpose and intent of the initial structure was that of a warehouse for Central Warehouse of Elkhart, Indiana.

In July 1975, the property was transferred to the Dietzgen Corporation. The facility was then primarily used for paper related product manufacturing. As part of their manufacturing process operation, the Dietzgen Corporation had installed two (2) Underground Storage Tanks (UST's) for chemical product storage. It was learned through interviews with personnel that were employed with the Dietzgen Corporation that the product contained in the UST's was acetone.

Transfer of property from the Dietzgen Corporation to Lee R. Anderson, current owner of Anco Products, Incorporated occurred during June 1977. At present, the project site is engaged in the process of manufacturing insulating products and flexible air ducts. The project site discharges only sanitary wastewater to the Elkhart Publicly Owned Treatment Works (POTW). Water is supplied to the manufacturing facility by the POTW. In addition, there are no drywells, septic/field systems, nor retention basins located at the project site. It should also be stated that the facility does not generate hazardous waste as defined by Environmental Protection Agency (EPA) regulation/definition.

The UST's located at the project site were initially thought to be taken "out of service" when Lee R. Anderson purchased the property. After learning that the UST's had not been removed or closed in place, it was decided by representatives of Anco Products, that closure would take place.

During the time of UST closure, four (4) monitoring wells were installed at the project site. Hollow-stem auger techniques were used with a screened lead auger to evaluate the vertical and lateral extent of potential groundwater constituent plume(s). Four soil borings were drilled and all were converted to monitoring wells. Each borehole was logged by a field operator qualified to identify subsurface conditions. Locations of the monitoring wells are contained in **Appendix I**. All pertinent field and geological data were recorded. Boring locations were chosen judgementally. This method requires a limited knowledge relevant to historical usage of the property including visual assessment methodologies. The project site was assessed for inferred groundwater flow and surface run-off as depicted in the Indiana Department of Natural Resources (IDNR) document; Saint Joseph River Basin, Water Resource Assessment, 87-1.

The measuring point elevations of all installed monitoring wells were surveyed by a registered land surveyor and referenced to a site benchmark. **Table II-1** lists the monitoring well elevations. Locations of the borings are contained in the topography collected and developed by Saylor Land Surveying, 9038 East, 50 North, Mill Creek, Indiana.

Included in the topography are groundwater elevations and groundwater flow as determined by a Hydrogeologist. Directional groundwater flow for the project site is North, Northeast (NNE). It should be stated that the directional flow of NNE is inconsistent with regional flow patterns to the Saint Joseph River Basin, or to the North Northwest (NNW).

The installed monitoring wells consist of a clean sand filter pack installed around the well screen to a level two feet above the top of the screen, followed by a two foot bentonite seal. The annulus of the monitoring well was sealed with a bentonite/cement slurry backfill. The wells were then secured with a locking cap. A generalized flush mount well construction diagram is presented in **Appendix II**. Following the completion of drilling, and installation of the monitoring wells, the monitoring wells were developed using a Geo-Tech hand pump or Teflon Bailer. A minimum of twenty well volumes of the groundwater was purged due to the presence of silty fine grain sands.

Based upon information prepared, reviewed, and submitted, the UST's were closed in accordance with EPA methodology.

ANCO PRODUCTS, INCORPORATED  
ELKHART, INDIANA

TABLE 11 - 1

MONITORING WELL ELEVATION (FEET)

MARCH 25, 1993

<u>MONITOR WELL</u>	<u>STATIC LEVEL</u>	<u>TOP OF PVC TO GROUND</u>	<u>TOP OF PVC TO BOTTOM OF THE MONITOR WELL</u>
MW 1	12.5	N/A	23.35
MW 2	15.0	2.75	25.6
MW 3	15.2	2.8	25.4
MW 4	13.9	2.9	25.6

WEATHER CONDITIONS: 50 DEGREES; CLOUDY

Closure documents were filed with the Indiana Department of Environmental Management (IDEM) to include copies of analytical results meeting the criteria for UST closure. Based upon findings, it was determined that the UST's did not impact soil or groundwater at the project site.

As part of additional environmental related concerns, it was decided upon by representatives of Anco Products to conduct annual monitoring of groundwater at the project site. Upon recommendation by engineering/consulting firms, future laboratory analysis of groundwater collected from the monitoring wells will include parameters identified as Volatile Organic Compounds (VOC's).

### **III. Detection Of TCE And TCA**

After closure of the UST's was completed, sampling of the monitoring wells were conducted in December 1990, September 1991, and February 1992. **Table III-1** provides an overview of analytical results from each sampling round.

Contained in **Appendix III** are analytical results from December 1990. Contained in **Appendix IV** are analytical results from September 1991. Contained in **Appendix V** are analytical results from February 1992.

Since laboratory results verified the presence of Trichloroethylene (TCE) and 1,1,1-Trichloroethane (TCA) it was determined that off-site sources should be evaluated to determine if their chemical usage could have impacted the project site.

As part of Anco Products continuing efforts to identify source(s) of TCE and TCA contamination, an "Assessment Update" was prepared by John C. Wallace, Incorporated, South Bend, Indiana, on August 21, 1991. The assessment update is included in **Appendix VI** of this document.

### **IV. Submission Of Documents To Regulating Agencies**

During the course of investigation conducted, it was decided upon by representatives of Anco Products that results of findings would be submitted to the IDEM as part of an information sharing effort. On July 24, 1991, a report prepared by John C. Wallace, Incorporated, South Bend, Indiana, was submitted to Mr. Harry Ackerson, IDEM. This report is contained in **Appendix VII**.

ANCO PRODUCTS, INCORPORATED  
ELKHART, INDIANA

TABLE 111 - 1

POSITIVE GROUNDWATER RESULTS

1990 RESULTS

	<u>MW 1</u>	<u>MW 2</u>	<u>MW 3</u>	<u>MW 4</u>
<u>TCE</u>	22	81	6.9	8.9
<u>TCA</u>	ND	ND	4.7	2.6

1991 RESULTS

	<u>MW 1</u>	<u>MW 2</u>	<u>MW 3</u>	<u>MW 4</u>
<u>TCE</u>	13	8.5	64	20
<u>TCA</u>	9.8	3.1	ND	1.2

1993 RESULTS

	<u>MW 1</u>	<u>MW 2</u>	<u>MW 3</u>	<u>MW 4</u>
<u>TCE</u>	17	38	6.8	14
<u>TCA</u>	ND	ND	3.1	3.6

● ALL RESULTS EXPRESSED IN PARTS PER BILLION

At the time of report preparation, it was believed by representatives of Anco Products that TCE was never used at the project site. It was stated in the submitted report that "Anco Products, Incorporated has never used Trichloroethylene (TCE) in their manufacturing processes". However, during the course of records reviewed by senior management in December 1992 as a result of a request for production of documents to a non-party resulting from a lawsuit, it was learned that TCE was used for equipment cleaning purposes in the late 1970's and early 1980's. All equipment cleaning was conducted in-house with the TCE evaporating after it was applied to equipment/machinery components. Application methods were that of "cleaning rags". TCE was never sprayed nor contained in degreasing tanks at the project site which is more consistent with its historical industrial usage. In addition, TCE was never generated as a hazardous waste nor transported off-site as a hazardous waste.

#### **V. Final Discussion**

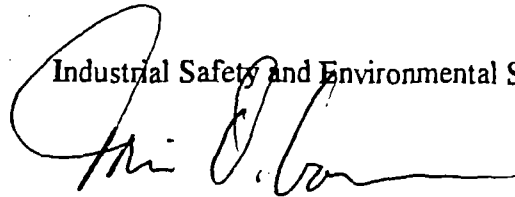
It is the opinion of ISES that elevated levels of TCE, and TCA are not the result of manufacturing operations conducted at the project site.

The manufacturing facility is always found to be in good condition with respect to chemical storage and process operations associated with chemical usage. It is believed that the efforts put forth thus far by Anco Products have been prudent in trying to determine sources for TCE, and TCA contamination.

Based upon review of the analytical results, it appears that TCE contamination could be leaving the project site. It is recommended that monitoring of the installed wells be directed on a biannual basis. This effort would assist in determining if TCE is moving off-site.

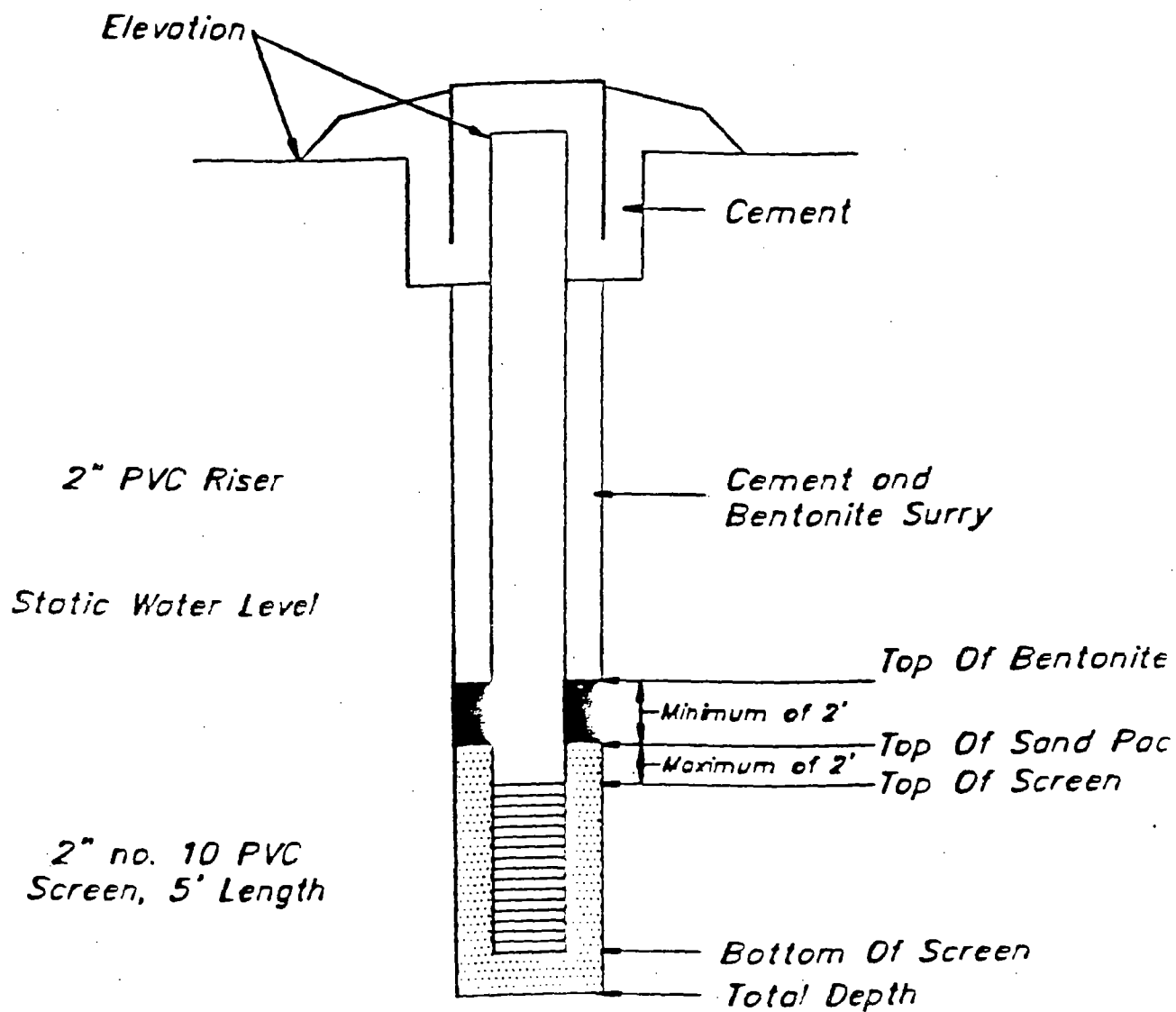
Should additional information become available concerning the project site or adjacent properties, it may require altering the conclusions of this report. Such information would need to be made available to ISES in the event that the contents would need to be modified.

Should you have any questions, please feel free to contact our office at your earliest convenience.

Industrial Safety and Environmental Services  


By:  
Tris O. Gour  
April 8, 1993





*(Not to Scale)*

## WELL CONSTRUCTION DIAGRAM FOR MONITORING WELLS

Sample description - Anco :  
Anco tank assessment

Sample ID = 90-12-80-1


Parameter: Purgeables(601/02)

Date analyzed: December 17, 1990

Matrix: Water

Method: Purge & Trap

Compound	Concentration ug/l	Detection Limit ug/l
Dichlorodifluoromethane	ND	< 1.0
Chloromethane	ND	< 2.0
Vinyl chloride	ND	< 2.0
Chloroethane	ND	< 2.0
Bromoethane	ND	< 1.5
1,1-Dichloroethene	ND	< 0.4
Methylene chloride	ND	< 2.0
t-1,2-Dichloroethene	ND	< 0.2
1,1-Dichloroethane	ND	< 0.3
c-1,2-Dichloroethene	ND	< 0.2
Chloroform	ND	< 1.0
1,1,1-Trichloroethane	2.6	< 0.2
Carbon tetrachloride	ND	< 0.2
Benzene	ND	< 0.4
1,2-Dichloroethane	ND	< 0.2
Trichloroethene	8.9	< 0.5
1,2-Dichloropropane	ND	< 1.0
Bromodichloromethane	ND	< 0.5
2-Chloroethylvinyl ether	ND	< 0.5
t-1,3-Dichloropropene	ND	< 1.0
Toluene	ND	< 0.2
c-1,3-Dichloropropene	ND	< 1.0
1,1,2-Trichloroethane	ND	< 1.0
Tetrachloroethene	ND	< 1.0
Dibromochloromethane	ND	< 1.0
Chlorobenzene	ND	< 0.2
Ethylbenzene	ND	< 0.2
m+p-Xylene	ND	< 0.2
o-Xylene	ND	< 0.2
Bromoform	ND	< 0.9
1,1,2,2-Tetrachloroethane	ND	< 0.7
1,3-Dichlorobenzene	ND	< 0.4
1,4-Dichlorobenzene	ND	< 0.4
1,2-Dichlorobenzene	ND	< 0.4

  
Analyst: R. S. Lynch

**DIHYDRO ANALYTICAL SERVICES**

DiHydro Analytical Services, 4455 Fletcher, Wayne, MI, (313) 595-0335

AD-1000 DIHYDRO  
\*\*\*\*\*

Sample description - Anco 2  
Anco tank assessment

Sample ID = 90-12-80-2

Parameter: Purgeables(601/02)

Date analyzed: December 17, 1990

Matrix: Water

Method: Purge & Trap

Compound	Concentration ug/l	Detection Limit ug/l
Dichlorodifluoromethane	ND	< 1.0
Chloromethane	ND	< 2.0
Vinyl chloride	ND	< 2.0
Chloroethane	ND	< 2.0
Bromoethane	ND	< 1.5
1,1-Dichloroethene	ND	< 0.4
Methylene chloride	ND	< 2.0
t-1,2-Dichloroethene	ND	< 0.2
1,1-Dichloroethane	ND	< 0.3
c-1,2-Dichloroethene	ND	< 0.2
Chloroform	ND	< 1.0
1,1,1-Trichloroethane	4.7	< 0.2
Carbon tetrachloride	ND	< 0.2
Benzene	ND	< 0.4
1,2-Dichloroethane	ND	< 0.2
Trichloroethene	6.9	< 0.5
1,2-Dichloropropane	ND	< 1.0
Bromodichloromethane	ND	< 0.5
2-Chloroethylvinyl ether	ND	< 0.5
t-1,3-Dichloropropene	ND	< 1.0
Toluene	ND	< 0.2
c-1,3-Dichloropropene	ND	< 1.0
1,1,2-Trichloroethane	ND	< 1.0
Tetrachloroethene	ND	< 1.0
Dibromochloromethane	ND	< 1.0
Chlorobenzene	ND	< 0.2
Ethylbenzene	ND	< 0.2
m+p-Xylene	ND	< 0.2
o-Xylene	ND	< 0.2
Bromoform	ND	< 0.9
1,1,2,2-Tetrachloroethane	ND	< 0.7
1,3-Dichlorobenzene	ND	< 0.4
1,4-Dichlorobenzene	ND	< 0.4
1,2-Dichlorobenzene	ND	< 0.4

Analyst: R. S. Lynch

**DIHYDRO ANALYTICAL SERVICES**

Dihydro Analytical Services, 4455 Fletcher Wayne, MI, (313) 595-0335

AD 10000 DIHYDRO

Sample description - Anco 3  
Anco tank assessment

Sample ID = 90-12-80-3

Parameter: Purgeables(601/02)

Date analyzed: December 17, 1990

Matrix: Water

Method: Purge & Trap

Compound	Concentration ug/l	Detection Limit ug/l
Dichlorodifluoromethane	ND	< 1.0
Chloromethane	ND	< 2.0
Vinyl chloride	ND	< 2.0
Chloroethane	ND	< 2.0
Bromoethane	ND	< 1.5
1,1-Dichloroethene	ND	< 0.4
Methylene chloride	ND	< 2.0
t-1,2-Dichloroethene	ND	< 0.2
1,1-Dichloroethane	ND	< 0.3
c-1,2-Dichloroethene	ND	< 0.2
Chloroform	ND	< 1.0
1,1,1-Trichloroethane	ND	< 0.2
Carbon tetrachloride	ND	< 0.2
Benzene	ND	< 0.4
1,2-Dichloroethane	ND	< 0.2
Trichloroethene	81	< 0.5
1,2-Dichloropropane	ND	< 1.0
Bromodichloromethane	ND	< 0.5
2-Chloroethylvinyl ether	ND	< 0.5
t-1,3-Dichloropropene	ND	< 1.0
Toluene	ND	< 0.2
c-1,3-Dichloropropene	ND	< 1.0
1,1,2-Trichloroethane	ND	< 1.0
Tetrachloroethene	ND	< 1.0
Dibromochloromethane	ND	< 1.0
Chlorobenzene	ND	< 0.2
Ethylbenzene	ND	< 0.2
m+p-Xylene	ND	< 0.2
o-Xylene	ND	< 0.2
Bromoform	ND	< 0.9
1,1,2,2-Tetrachloroethane	ND	< 0.7
1,3-Dichlorobenzene	ND	< 0.4
1,4-Dichlorobenzene	ND	< 0.4
1,2-Dichlorobenzene	ND	< 0.4

  
Analyst: R. S. Litch

**DIHYDRO ANALYTICAL SERVICES**

Dihydro Analytical Services, 4455 Fletcher Wayne, MI, (313) 595-0335

ADDITIONAL DIHYDRO

Sample description - Anco 4  
Anco tank assessment

Sample ID = 90-12-80-4


Parameter: Purgeables(601/02)

Date analyzed: December 17, 1990

Matrix: Water

Method: Purge & Trap

Compound	Concentration ug/l	Detection Limit ug/l
Dichlorodifluoromethane	ND	< 1.0
Chloromethane	ND	< 2.0
Vinyl chloride	ND	< 2.0
Chloroethane	ND	< 2.0
Bromoethane	ND	< 1.5
1,1-Dichloroethene	ND	< 0.4
Methylene chloride	ND	< 2.0
t-1,2-Dichloroethene	ND	< 0.2
1,1-Dichloroethane	ND	< 0.3
c-1,2-Dichloroethene	ND	< 0.2
Chloroform	ND	< 1.0
1,1,1-Trichloroethane	ND	< 0.2
Carbon tetrachloride	ND	< 0.2
Benzene	ND	< 0.4
1,2-Dichloroethane	ND	< 0.2
Trichloroethene	22	< 0.5
1,2-Dichloropropane	ND	< 1.0
Bromodichloromethane	ND	< 0.5
2-Chloroethylvinyl ether	ND	< 0.5
t-1,3-Dichloropropene	ND	< 1.0
Toluene	ND	< 0.2
c-1,3-Dichloropropene	ND	< 1.0
1,1,2-Trichloroethane	ND	< 1.0
Tetrachloroethene	ND	< 1.0
Dibromochloromethane	ND	< 1.0
Chlorobenzene	ND	< 0.2
Ethylbenzene	ND	< 0.2
m+p-Xylene	ND	< 0.2
o-Xylene	ND	< 0.2
Bromoform	ND	< 0.9
1,1,2,2-Tetrachloroethane	ND	< 0.7
1,3-Dichlorobenzene	ND	< 0.4
1,4-Dichlorobenzene	ND	< 0.4
1,2-Dichlorobenzene	ND	< 0.4

  
Analyst: R. S. Eynon

**DIHYDRO ANALYTICAL SERVICES**

Dihydro Analytical Services, 4455 Fletcher, Wayne, MI, (313) 595-0335

AD-100 DIHYDRO  
\*\*\*\*\*

Sample description - Method standard  
90-12-39/-43/-64/-80/-98

SAMPLE ID = MSpike

Parameter: PURGEABLES(601&2)

Date analyzed: 12-17-90

Matrix: Water

Analyst: rsl

Compound	Mean ug/l	Spike ug/l	True Spike ug/l	% Recovery
Methylene chloride	0.0	25.1	21.2	118.6
1,1-Dichloroethane	0.0	24.5	21.8	112.3
Chloroform	0.0	24.8	23.0	107.8
1,1,1-Trichloroethane	0.0	24.4	23.1	105.6
1,2-Dichloroethane	0.0	26.8	22.6	118.7
Trichloroethene	0.0	25.3	25.6	98.8
1,2-Dichloropropane	0.0	22.1	22.5	98.4
Toluene	0.0	23.2	21.0	110.7
1,1,2-Trichloroethane	0.0	24.3	24.4	99.6
Tetrachloroethene	0.0	30.9	32.2	96.0
Chlorobenzene	0.0	18.5	22.5	82.4
Ethylbenzene	0.0	20.7	22.1	93.5
m+p-Xylene	0.0	20.5	21.2	96.8
o-Xylene	0.0	19.4	22.4	86.8
1,1,2,2-Tetrachloroethane	0.0	19.8	21.8	90.8
1,3-Dichlorobenzene	0.0	18.3	22.4	81.9
1,4-Dichlorobenzene	0.0	28.5	27.3	104.3
1,2-Dichlorobenzene	0.0	21.3	23.1	92.2

Sample description - ANCO-1 Monitoring Well

Sample ID = 91-09-97-1

Parameter: Purgeables(601/02)

Date analyzed: September 24, 1991

Matrix: Water

Method: Purge & Trap

Compound	Concentration ug/l	Detection Limit ug/l
Dichlorodifluoromethane	ND	1.0
Chloromethane	ND	2.0
Vinyl chloride	ND	2.0
Chloroethane	ND	2.0
Bromoethane	ND	1.5
1,1-Dichloroethene	ND	0.4
Methylene chloride	ND	2.0
t-1,2-Dichloroethene	ND	0.2
1,1-Dichloroethane	ND	0.3
c-1,2-Dichloroethene	ND	0.2
Chloroform	ND	1.0
1,1,1-Trichloroethane	9.8	0.2
Carbon tetrachloride	ND	0.2
Benzene	ND	0.4
1,2-Dichloroethane	ND	0.2
Trichloroethene	13	0.5
1,2-Dichloropropane	ND	1.0
Bromodichloromethane	ND	0.5
2-Chloroethylvinyl ether	ND	0.5
t-1,3-Dichloropropene	ND	1.0
Toluene	ND	0.2
c-1,3-Dichloropropene	ND	1.0
1,1,2-Trichloroethane	ND	0.8
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	1.0
Chlorobenzene	ND	0.2
Ethylbenzene	ND	0.2
m+p-Xylene	ND	0.2
o-Xylene	ND	0.2
Bromoform	ND	0.9
1,1,2,2-Tetrachloroethane	ND	0.7
1,3-Dichlorobenzene	ND	0.4
1,4-Dichlorobenzene	ND	0.4
1,2-Dichlorobenzene	ND	0.4

*Claudia R. Donase*  
Analyst: Claudia R. Donase

DIHYDRO ANALYTICAL SERVICES

1000 - 2nd Street, Suite 200, San Francisco, CA 94107

415-333-3335

DIHYDRO  
ANALYTICAL

Sample description - ANCO-2 Monitoring Well

Sample ID = 91-09-97-2

Parameter: Furgeables(601/02)

Date analyzed: September 24, 1991

Matrix: Water

Method: Purge & Trap

Compound	Concentration ug/l	Detection Limit ug/l
Dichlorodifluoromethane	ND	1.0
Chloromethane	ND	2.0
Vinyl chloride	ND	2.0
Chloroethane	ND	2.0
Bromoethane	ND	1.5
1,1-Dichloroethene	ND	0.4
Methylene chloride	ND	2.0
t-1,2-Dichloroethene	ND	0.2
1,1-Dichloroethane	ND	0.3
c-1,2-Dichloroethene	ND	0.2
Chloroform	ND	1.0
1,1,1-Trichloroethane	3.1	0.2
Carbon tetrachloride	ND	0.2
Benzene	ND	0.4
1,2-Dichloroethane	ND	0.2
Trichloroethene	8.5	0.5
1,2-Dichloropropane	ND	1.0
Bromodichloromethane	ND	0.5
2-Chloroethylvinyl ether	ND	0.5
t-1,3-Dichloropropene	ND	1.0
Toluene	ND	0.2
c-1,3-Dichloropropene	ND	1.0
1,1,2-Trichloroethane	1.1	0.8
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	1.0
Chlorobenzene	ND	0.2
Ethylbenzene	ND	0.2
m+p-Xylene	ND	0.2
o-Xylene	ND	0.2
Bromoform	ND	0.9
1,1,2,2-Tetrachloroethane	ND	0.7
1,3-Dichlorobenzene	ND	0.4
1,4-Dichlorobenzene	ND	0.4
1,2-Dichlorobenzene	ND	0.4

*Claudia R. Donase*  
Analyst: Claudia R. Donase

DIHYDRO ANALYTICAL SERVICES

1000 10th Street, Suite 100, San Francisco, CA 94103

DIHYDRO  
ANALYTICAL



Sample description - ANCO-3 Monitoring Well

Sample ID = 91-09-97-3

Parameter: Purgeables(601/02)

Date analyzed: September 24, 1991

Matrix: Water

Method: Purge & Trap

Compound	Concentration ug/l	Detection Limit ug/l
Dichlorodifluoromethane	ND	1.0
Chloromethane	ND	2.0
Vinyl chloride	ND	2.0
Chloroethane	ND	2.0
Bromoethane	ND	1.5
1,1-Dichloroethene	ND	0.4
Methylene chloride	ND	2.0
t-1,2-Dichloroethene	ND	0.2
1,1-Dichloroethane	ND	0.3
c-1,2-Dichloroethene	ND	0.2
Chloroform	ND	1.0
1,1,1-Trichloroethane	ND	0.2
Carbon tetrachloride	ND	0.2
Benzene	ND	0.4
1,2-Dichloroethane	ND	0.2
Trichloroethene	64	0.5
1,2-Dichloropropane	ND	1.0
Bromodichloromethane	ND	0.5
2-Chloroethylvinyl ether	ND	0.5
t-1,3-Dichloropropene	ND	1.0
Toluene	ND	0.2
c-1,3-Dichloropropene	ND	1.0
1,1,2-Trichloroethane	ND	0.8
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	1.0
Chlorobenzene	ND	0.2
Ethylbenzene	ND	0.2
m+p-Xylene	ND	0.2
o-Xylene	ND	0.2
Bromoform	ND	0.9
1,1,2,2-Tetrachloroethane	ND	0.7
1,3-Dichlorobenzene	ND	0.4
1,4-Dichlorobenzene	ND	0.4
1,2-Dichlorobenzene	ND	0.4

  
Analyst: Claudia R. Donase

DIHYDRO ANALYTICAL SERVICES

Environmental Analytical Services 4455 Fletcher Wayne Ave #313 595-0335



DIHYDRO  
ANALYTICAL SERVICES

Sample description - ANCO-4 Monitoring Well

Sample ID = 91-09-97-4


Parameter: Purgeables(601/02)

Date analyzed: September 24, 1991

Matrix: Water

Method: Purge & Trap

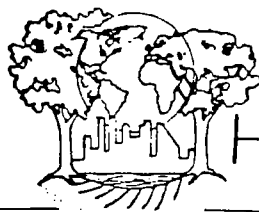
Compound	Concentration ug/l	Detection Limit ug/l
Dichlorodifluoromethane	ND	1.0
Chloromethane	ND	2.0
Vinyl chloride	ND	2.0
Chloroethane	ND	2.0
Bromoethane	ND	1.5
1,1-Dichloroethene	ND	0.4
Methylene chloride	ND	2.0
t-1,2-Dichloroethene	ND	0.2
1,1-Dichloroethane	ND	0.3
c-1,2-Dichloroethene	ND	0.2
Chloroform	ND	1.0
1,1,1-Trichloroethane	ND	0.2
Carbon tetrachloride	ND	0.2
Benzene	ND	0.4
1,2-Dichloroethane	ND	0.2
Trichloroethene	20	0.5
1,2-Dichloropropane	ND	1.0
Bromodichloromethane	ND	0.5
2-Chloroethylvinyl ether	ND	0.5
t-1,3-Dichloropropene	ND	1.0
Toluene	ND	0.2
c-1,3-Dichloropropene	ND	1.0
1,1,2-Trichloroethane	1.2	0.8
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	1.0
Chlorobenzene	ND	0.2
Ethylbenzene	ND	0.2
m+p-Xylene	ND	0.2
o-Xylene	ND	0.2
Bromoform	ND	0.9
1,1,2,2-Tetrachloroethane	ND	0.7
1,3-Dichlorobenzene	ND	0.4
1,4-Dichlorobenzene	ND	0.4
1,2-Dichlorobenzene	ND	0.4

  
Analyst: Claudia F. Bonase

DIHYDRO ANALYTICAL SERVICES

Environmental Analytical Services 4455 Fletcher Way, N.E. 213 545-0037





# Environmental Health Laboratories

110 S. Hill Street  
South Bend, IN 46617  
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## LABORATORY REPORT

Client: Industrial Safety & Environmental Services  
Attn: Tris Gour  
716 Lincolnway West  
Osceola, IN 46561

Report#: 53250-53

Priority: Standard Written

Status: Final

Project/Site: Anco Products

Samples Submitted: Four groundwater samples

Copies to: None

Collected: 02-10-93

By: Client

Received: 02-10-93

### REPORT SUMMARY

**Volatile Organic Chemicals:** The volatile organic chemicals listed below were detected in the water sample submitted for analysis.

Site	Parameter	Results
MW-1	Trichloroethylene	38 µg/L
MW-2	1,1,1-Trichloroethane	3.1 µg/L
	Trichloroethylene	6.8 µg/L
MW-3	1,1,1-Trichloroethane	3.6 µg/L
	Trichloroethylene	14 µg/L
MW-4	Trichloroethylene	17 µg/L

Results of all associated quality control samples were within acceptance limits. No project specific quality control was requested.

This test covers chemical contamination arising from gasoline and other fuels, dry-cleaning and paint solvents, and many other industrial solvents.

Detailed quantitative results are presented on the following pages.

We appreciate the opportunity to provide you with this analysis. If you have any questions concerning this report, please do not hesitate to call us at (219) 233-4777.

REVIEWED BY:

DATE:

03-03-93

FINALIZED BY:

DATE:

03/03/93

**VOLATILE ORGANIC CHEMICALS—Groundwater**

Site: MW-1

Lab #: 53250

Parameter	PQL		Results	
Benzene	0.5	<	0.5	µg/L
Bromobenzene	1.0	<	1.0	µg/L
Bromochloromethane	1.0	<	1.0	µg/L
Bromodichloromethane	0.5	<	0.5	µg/L
Bromoform	0.5	<	0.5	µg/L
Bromomethane	2.0	<	2.0	µg/L
n-Butylbenzene	1.0	<	1.0	µg/L
sec-Butylbenzene	1.0	<	1.0	µg/L
tert-Butylbenzene	1.0	<	1.0	µg/L
Carbon tetrachloride	0.5	<	0.5	µg/L
Chlorobenzene	1.0	<	1.0	µg/L
Chloroethane	2.0	<	2.0	µg/L
Chloroform	0.5	<	0.5	µg/L
Chloromethane	2.0	<	2.0	µg/L
1,2-Chlorotoluene	1.0	<	1.0	µg/L
1,4-Chlorotoluene	1.0	<	1.0	µg/L
Dibromochloromethane	0.5	<	0.5	µg/L
1,2-Dibromo-3-Chloropropane	1.0	<	1.0	µg/L
1,2-Dibromoethane(EDB)	1.0	<	1.0	µg/L
Dibromomethane	1.0	<	1.0	µg/L
1,2-Dichlorobenzene	1.0	<	1.0	µg/L
1,3-Dichlorobenzene	1.0	<	1.0	µg/L
1,4-Dichlorobenzene	0.5	<	0.5	µg/L
Dichlorodifluoromethane	1.0	<	1.0	µg/L
1,1-Dichloroethane	1.0	<	1.0	µg/L
1,2-Dichloroethane	0.5	<	0.5	µg/L
1,1-Dichloroethylene	0.5	<	0.5	µg/L
1,2-Dichloroethylene, cis	1.0	<	1.0	µg/L
1,2-Dichloroethylene, trans	1.0	<	1.0	µg/L
Dichloromethane	1.0	<	1.0	µg/L
1,2-Dichloropropane	1.0	<	1.0	µg/L
1,3-Dichloropropane	1.0	<	1.0	µg/L
2,2-Dichloropropane	1.0	<	1.0	µg/L
1,1-Dichloropropylene	1.0	<	1.0	µg/L
1,3-Dichloropropylene, cis	1.0	<	1.0	µg/L

Continued on the following page.

**VOLATILE ORGANIC CHEMICALS—Groundwater, continued**

Site: MW-1

Lab #: 53250

Parameter	PQL		Results	
1,3-Dichloropropylene,trans	1.0	<	1.0	µg/L
Ethylbenzene	0.5	<	0.5	µg/L
Hexachlorobutadiene	1.0	<	1.0	µg/L
Isopropylbenzene	1.0	<	1.0	µg/L
1,4-Isopropyltoluene	1.0	<	1.0	µg/L
Napthalene	1.0	<	1.0	µg/L
n-Propylbenzene	1.0	<	1.0	µg/L
Styrene	1.0	<	1.0	µg/L
1,1,1,2-Tetrachloroethane	1.0	<	1.0	µg/L
1,1,2,2-Tetrachloroethane	1.0	<	1.0	µg/L
Tetrachloroethylene	1.0	<	1.0	µg/L
Toluene	1.0	<	1.0	µg/L
1,2,3-Trichlorobenzene	1.0	<	1.0	µg/L
1,2,4-Trichlorobenzene	1.0	<	1.0	µg/L
1,1,1-Trichloroethane	0.5	<	0.5	µg/L
1,1,2-Trichloroethane	1.0	<	1.0	µg/L
Trichloroethylene	0.5		38	µg/L
Trichlorofluoromethane	1.0	<	1.0	µg/L
1,2,3-Trichloropropane	1.0	<	1.0	µg/L
1,2,4-Trimethylbenzene	1.0	<	1.0	µg/L
1,3,5-Trimethylbenzene	1.0	<	1.0	µg/L
Vinyl chloride	0.5	<	0.5	µg/L
Total Xylenes	1.0	<	1.0	µg/L

If dilutions were required for quantitation of specific parameters, they are indicated by a (√) preceding the result.

Surrogate Standards	Limits (%)	% Recovery
		Undil
Bromofluorobenzene	86-115	97
1,2-Dichloroethane-d4	76-114	94
Toluene - d8	88-110	97

Analyzed: 02-11-93

Analyst: ES

Method: 8260

**VOLATILE ORGANIC CHEMICALS—Groundwater**

Site: MW-2

Lab #: 53251

Parameter	PQL		Results
Benzene	0.5	<	0.5 µg/L
Bromobenzene	1.0	<	1.0 µg/L
Bromochloromethane	1.0	<	1.0 µg/L
Bromodichloromethane	0.5	<	0.5 µg/L
Bromoform	0.5	<	0.5 µg/L
Bromomethane	2.0	<	2.0 µg/L
n-Butylbenzene	1.0	<	1.0 µg/L
sec-Butylbenzene	1.0	<	1.0 µg/L
tert-Butylbenzene	1.0	<	1.0 µg/L
Carbon tetrachloride	0.5	<	0.5 µg/L
Chlorobenzene	1.0	<	1.0 µg/L
Chloroethane	2.0	<	2.0 µg/L
Chloroform	0.5	<	0.5 µg/L
Chloromethane	2.0	<	2.0 µg/L
1,2-Chlorotoluene	1.0	<	1.0 µg/L
1,4-Chlorotoluene	1.0	<	1.0 µg/L
Dibromochloromethane	0.5	<	0.5 µg/L
1,2-Dibromo-3-Chloropropane	1.0	<	1.0 µg/L
1,2-Dibromoethane(EDB)	1.0	<	1.0 µg/L
Dibromomethane	1.0	<	1.0 µg/L
1,2-Dichlorobenzene	1.0	<	1.0 µg/L
1,3-Dichlorobenzene	1.0	<	1.0 µg/L
1,4-Dichlorobenzene	0.5	<	0.5 µg/L
Dichlorodifluoromethane	1.0	<	1.0 µg/L
1,1-Dichloroethane	1.0	<	1.0 µg/L
1,2-Dichloroethane	0.5	<	0.5 µg/L
1,1-Dichloroethylene	0.5	<	0.5 µg/L
1,2-Dichloroethylene, cis	1.0	<	1.0 µg/L
1,2-Dichloroethylene, trans	1.0	<	1.0 µg/L
Dichloromethane	1.0	<	1.0 µg/L
1,2-Dichloropropane	1.0	<	1.0 µg/L
1,3-Dichloropropane	1.0	<	1.0 µg/L
2,2-Dichloropropane	1.0	<	1.0 µg/L
1,1-Dichloropropylene	1.0	<	1.0 µg/L
1,3-Dichloropropylene, cis	1.0	<	1.0 µg/L

Continued on the following page.

Client: Industrial Safety &amp; Environmental Services

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**VOLATILE ORGANIC CHEMICALS—Groundwater, continued**

Site: MW-2

Lab #: 53251

Parameter	PQL		Results	
1,3-Dichloropropylene,trans	1.0	<	1.0	µg/L
Ethylbenzene	0.5	<	0.5	µg/L
Hexachlorobutadiene	1.0	<	1.0	µg/L
Isopropylbenzene	1.0	<	1.0	µg/L
1,4-Isopropyltoluene	1.0	<	1.0	µg/L
Napthalene	1.0	<	1.0	µg/L
n-Propylbenzene	1.0	<	1.0	µg/L
Styrene	1.0	<	1.0	µg/L
1,1,1,2-Tetrachloroethane	1.0	<	1.0	µg/L
1,1,2,2-Tetrachloroethane	1.0	<	1.0	µg/L
Tetrachloroethylene	1.0	<	1.0	µg/L
Toluene	1.0	<	1.0	µg/L
1,2,3-Trichlorobenzene	1.0	<	1.0	µg/L
1,2,4-Trichlorobenzene	1.0	<	1.0	µg/L
1,1,1-Trichloroethane	0.5		3.1	µg/L
1,1,2-Trichloroethane	1.0	<	1.0	µg/L
Trichloroethylene	0.5		6.8	µg/L
Trichlorofluoromethane	1.0	<	1.0	µg/L
1,2,3-Trichloropropane	1.0	<	1.0	µg/L
1,2,4-Trimethylbenzene	1.0	<	1.0	µg/L
1,3,5-Trimethylbenzene	1.0	<	1.0	µg/L
Vinyl chloride	0.5	<	0.5	µg/L
Total Xylenes	1.0	<	1.0	µg/L

If dilutions were required for quantitation of specific parameters, they are indicated by a (√) preceding the result.

Surrogate Standards	% Recovery	
	Limits (%)	Undil
Bromofluorobenzene	86-115	102
1,2-Dichloroethane-d4	76-114	89
Toluene - d8	88-110	96

Analyzed: 02-11-93

Analyst: ES

Method: 8260

**VOLATILE ORGANIC CHEMICALS—Groundwater**

Site: MW-3

Lab #: 53252

Parameter	PQL		Results
Benzene	0.5	<	0.5 µg/L
Bromobenzene	1.0	<	1.0 µg/L
Bromochloromethane	1.0	<	1.0 µg/L
Bromodichloromethane	0.5	<	0.5 µg/L
Bromoform	0.5	<	0.5 µg/L
Bromomethane	2.0	<	2.0 µg/L
n-Butylbenzene	1.0	<	1.0 µg/L
sec-Butylbenzene	1.0	<	1.0 µg/L
tert-Butylbenzene	1.0	<	1.0 µg/L
Carbon tetrachloride	0.5	<	0.5 µg/L
Chlorobenzene	1.0	<	1.0 µg/L
Chloroethane	2.0	<	2.0 µg/L
Chloroform	0.5	<	0.5 µg/L
Chloromethane	2.0	<	2.0 µg/L
1,2-Chlorotoluene	1.0	<	1.0 µg/L
1,4-Chlorotoluene	1.0	<	1.0 µg/L
Dibromochloromethane	0.5	<	0.5 µg/L
1,2-Dibromo-3-Chloropropane	1.0	<	1.0 µg/L
1,2-Dibromoethane(EDB)	1.0	<	1.0 µg/L
Dibromomethane	1.0	<	1.0 µg/L
1,2-Dichlorobenzene	1.0	<	1.0 µg/L
1,3-Dichlorobenzene	1.0	<	1.0 µg/L
1,4-Dichlorobenzene	0.5	<	0.5 µg/L
Dichlorodifluoromethane	1.0	<	1.0 µg/L
1,1-Dichloroethane	1.0	<	1.0 µg/L
1,2-Dichloroethane	0.5	<	0.5 µg/L
1,1-Dichloroethylene	0.5	<	0.5 µg/L
1,2-Dichloroethylene, cis	1.0	<	1.0 µg/L
1,2-Dichloroethylene, trans	1.0	<	1.0 µg/L
Dichloromethane	1.0	<	1.0 µg/L
1,2-Dichloropropane	1.0	<	1.0 µg/L
1,3-Dichloropropane	1.0	<	1.0 µg/L
2,2-Dichloropropane	1.0	<	1.0 µg/L
1,1-Dichloropropylene	1.0	<	1.0 µg/L
1,3-Dichloropropylene, cis	1.0	<	1.0 µg/L

Continued on the following page.



Client: Industrial Safety &amp; Environmental Services

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**VOLATILE ORGANIC CHEMICALS—Groundwater, continued**

Site: MW-3

Lab #: 53252

Parameter	PQL		Results
1,3-Dichloropropylene,trans	1.0	<	1.0 µg/L
Ethylbenzene	0.5	<	0.5 µg/L
Hexachlorobutadiene	1.0	<	1.0 µg/L
Isopropylbenzene	1.0	<	1.0 µg/L
1,4-Isopropyltoluene	1.0	<	1.0 µg/L
Napthalene	1.0	<	1.0 µg/L
n-Propylbenzene	1.0	<	1.0 µg/L
Styrene	1.0	<	1.0 µg/L
1,1,1,2-Tetrachloroethane	1.0	<	1.0 µg/L
1,1,2,2-Tetrachloroethane	1.0	<	1.0 µg/L
Tetrachloroethylene	1.0	<	1.0 µg/L
Toluene	1.0	<	1.0 µg/L
1,2,3-Trichlorobenzene	1.0	<	1.0 µg/L
1,2,4-Trichlorobenzene	1.0	<	1.0 µg/L
1,1,1-Trichloroethane	0.5		3.6 µg/L
1,1,2-Trichloroethane	1.0	<	1.0 µg/L
Trichloroethylene	0.5		14 µg/L
Trichlorofluoromethane	1.0	<	1.0 µg/L
1,2,3-Trichloropropane	1.0	<	1.0 µg/L
1,2,4-Trimethylbenzene	1.0	<	1.0 µg/L
1,3,5-Trimethylbenzene	1.0	<	1.0 µg/L
Vinyl chloride	0.5	<	0.5 µg/L
Total Xylenes	1.0	<	1.0 µg/L

If dilutions were required for quantitation of specific parameters, they are indicated by a (√) preceding the result.

		% Recovery
Surrogate Standards	Limits (%)	Undil
Bromofluorobenzene	86-115	107
1,2-Dichloroethane-d4	76-114	88
Toluene - d8	88-110	100

Analyzed: 02-11-93

Analyst: ES

Method: 8260

**VOLATILE ORGANIC CHEMICALS--Groundwater**

Site: MW-4

Lab #: 53253

Parameter	PQL		Results
Benzene	0.5	<	0.5 µg/L
Bromobenzene	1.0	<	1.0 µg/L
Bromochloromethane	1.0	<	1.0 µg/L
Bromodichloromethane	0.5	<	0.5 µg/L
Bromoform	0.5	<	0.5 µg/L
Bromomethane	2.0	<	2.0 µg/L
n-Butylbenzene	1.0	<	1.0 µg/L
sec-Butylbenzene	1.0	<	1.0 µg/L
tert-Butylbenzene	1.0	<	1.0 µg/L
Carbon tetrachloride	0.5	<	0.5 µg/L
Chlorobenzene	1.0	<	1.0 µg/L
Chloroethane	2.0	<	2.0 µg/L
Chloroform	0.5	<	0.5 µg/L
Chloromethane	2.0	<	2.0 µg/L
1,2-Chlorotoluene	1.0	<	1.0 µg/L
1,4-Chlorotoluene	1.0	<	1.0 µg/L
Dibromochloromethane	0.5	<	0.5 µg/L
1,2-Dibromo-3-Chloropropane	1.0	<	1.0 µg/L
1,2-Dibromoethane(EDB)	1.0	<	1.0 µg/L
Dibromomethane	1.0	<	1.0 µg/L
1,2-Dichlorobenzene	1.0	<	1.0 µg/L
1,3-Dichlorobenzene	1.0	<	1.0 µg/L
1,4-Dichlorobenzene	0.5	<	0.5 µg/L
Dichlorodifluoromethane	1.0	<	1.0 µg/L
1,1-Dichloroethane	1.0	<	1.0 µg/L
1,2-Dichloroethane	0.5	<	0.5 µg/L
1,1-Dichloroethylene	0.5	<	0.5 µg/L
1,2-Dichloroethylene, cis	1.0	<	1.0 µg/L
1,2-Dichloroethylene, trans	1.0	<	1.0 µg/L
Dichloromethane	1.0	<	1.0 µg/L
1,2-Dichloropropane	1.0	<	1.0 µg/L
1,3-Dichloropropane	1.0	<	1.0 µg/L
2,2-Dichloropropane	1.0	<	1.0 µg/L
1,1-Dichloropropylene	1.0	<	1.0 µg/L
1,3-Dichloropropylene, cis	1.0	<	1.0 µg/L

Continued on the following page.

Client: Industrial Safety &amp; Environmental Services

Report#: 53250-53

**VOLATILE ORGANIC CHEMICALS--Groundwater, continued**

Site: MW-4

Lab #: 53253

Parameter	PQL		Results	
1,3-Dichloropropylene,trans	1.0	<	1.0	µg/L
Ethylbenzene	0.5	<	0.5	µg/L
Hexachlorobutadiene	1.0	<	1.0	µg/L
Isopropylbenzene	1.0	<	1.0	µg/L
1,4-Isopropyltoluene	1.0	<	1.0	µg/L
Napthalene	1.0	<	1.0	µg/L
n-Propylbenzene	1.0	<	1.0	µg/L
Styrene	1.0	<	1.0	µg/L
1,1,1,2-Tetrachloroethane	1.0	<	1.0	µg/L
1,1,2,2-Tetrachloroethane	1.0	<	1.0	µg/L
Tetrachloroethylene	1.0	<	1.0	µg/L
Toluene	1.0	<	1.0	µg/L
1,2,3-Trichlorobenzene	1.0	<	1.0	µg/L
1,2,4-Trichlorobenzene	1.0	<	1.0	µg/L
1,1,1-Trichloroethane	0.5	<	0.5	µg/L
1,1,2-Trichloroethane	1.0	<	1.0	µg/L
Trichloroethylene	0.5		17	µg/L
Trichlorofluoromethane	1.0	<	1.0	µg/L
1,2,3-Trichloropropane	1.0	<	1.0	µg/L
1,2,4-Trimethylbenzene	1.0	<	1.0	µg/L
1,3,5-Trimethylbenzene	1.0	<	1.0	µg/L
Vinyl chloride	0.5	<	0.5	µg/L
Total Xylenes	1.0	<	1.0	µg/L

If dilutions were required for quantitation of specific parameters, they are indicated by a (v) preceeding the result.

Surrogate Standards	Limits (%)	% Recovery
		Undil
Bromofluorobenzene	86-115	104
1,2-Dichloroethane-d4	76-114	83
Toluene - d8	88-110	86

Analyzed: 02-11-93

Analyst: ES

Method: 8260

**REFERENCES AND DEFINITIONS OF TERMS**

**Volatile Organic Chemical (VOC) Groundwater Analysis**

Analytical Technique: Purge & Trap/GC/MS

Reference: EPA Test Methods for Evaluating Solid Waste  
SW-846, Third Edition, November 1986

**Volatile Organic Chemicals (VOC's)** are a group of natural and synthetic organic chemicals characterized by their volatility (ability to evaporate). The volatile chemicals included in this report have been selected by the EPA to be monitored both because of their suspected toxicity and because of their widespread use in industry. Many are used in the production of plastics, clothing and other common items found in most industries.

**Practical Quantitation Limits (PQL's)** represent the lower limit at which the compounds of interest can be accurately measured, at a 95% confidence level, and reported for a sample exhibiting minimal chemical background interference under the conditions employed in the analytical procedure. PQL's are by definition a function of the instrument performance for an ideal sample and thus are not adjusted for sample dilutions used to calculate results.

**Results:** Values presented in the result column represent the lowest reportable value for a parameter after correcting for all sample dilutions.

**1µg/L = 1 microgram per liter (ug/L) = 1 part per billion**

**< = "less than".** This number is the lowest reportable value by the procedure used for analysis.

# John C. Wallace, Inc.

*Environmental Consultant*

1215 Whitehall Drive

South Bend, Indiana 46615

Telephone 219-233-7141

August 21, 1991

Attn. Mr. Howard Tomlinson  
Anco Products  
2500 S. 17th St.  
Elkhart, IN

RE: Assessment for Risk Evaluation.  
Gemeinhardt, Bock, and Lusher Sites

Dear Howard:

I am pleased to submit three (3) copies of this report for an assessment for risk evaluation at Anco Products, 2500 S. Seventeenth Street, Elkhart, Indiana, hereinafter referred to as project site.

## Background.

The original intent of the site assessment conducted at the project site was to determine the impact, if any, that activities conducted during manufacturing processes, past and present, have had on the environment. This assessment was started by CHES Consultants and documents were released May 12, 1989; Preliminary Assessment, June 20, 1989; sample results and meeting with NBD representative.

During the time of the original assessment two underground storage tanks (USTs) were discovered. It was also discovered that a significant build up of waste material from the manufacturing processes, was known to exist at the base of the dust collection unit. Actions were taken to provide temporary closure of USTs till a formal site assessment for UST closure could be achieved. A system of monitor wells were installed as part of the assessment, to understand the subsurface condition of the project site related to The USTs and the dust collection unit.

Monitor wells were installed in a manner consistent with the inferred groundwater flow, depicted in the Indiana Department of Natural Resource (IDNR) document; St. Joseph River Basin. Water Resource Assessment 87-1. Parameters for analysis were decided upon as related to the products stored in the USTs and the material related to the dust collection unit (acetone, toluene, formaldehyde, phenols).

Samples were taken from the monitor wells in December of 1990 and again in January of 1991. The intent of the samples taken was to provide assessment data for the closure of the USTs. For the purpose of closure, it was only necessary to be concerned with the contents of the USTs (acetone and toluene). EPA Method 601/02 were the parameters requested for the analysis. This method is considered a solvent scan.

**Assessment Update  
August 21, 1991**

It was on receipt of the results for the analysis of the December samples that we learned of trichloroethylene (TCE) being present in the groundwater. Our findings were then confirmed through a second round of sampling, January 24, 1991. The analytical results were received February 1, 1991.

At that time it was decided by Anco Products and John C. Wallace, Inc., that closure of the USTs was of major concern. Dyhydro Analytical Services of Wayne, Michigan, who has provided analytical services throughout the project, agreed to enclose analysis data for compounds; acetone and toluene under a separate letter to be included with closure information, submitted to the Indiana Department of Environmental Management. Closure was achieved through submission of the February 20, 1991 document submitted by John C. Wallace, Inc. and Anco Products.

The findings hereunder are limited to findings of fact and not as to the applicability of the statute for the particular matter, for all such legal opinions advise of legal counsel should be obtained. John C. Wallace, Inc. approaches the legal issues from the point of view of the informed layman.

**Gemeinhardt, Bock Industries and Lusher St.**

Companies; Gemeinhardt and Bock Industries and the Lusher Street Groundwater Contamination Site, have long been on the state list of Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) properties for Elkhart County. The contamination associated with these sites is TCE. What makes the information for these sites even more confusing, is that the Gemeinhardt property is the only site with a known source for the TCE contamination. There has been much speculation that the origin for the contamination in all three sites has originated at the Gemeinhardt Site.

Gemeinhardt, has in the past, used an injection well for much of the water type waste disposal including degreasing type solvents; TCE. Gemeinhardt took the injection well out of service prior to 1984. Hazardous waste was banned in December of 1984, in a system like the one for the Gemeinhardt site (40 Code of Federal Regulations 144). However, considerable contamination was thought to of originated from the usage. It was also learned, by the IDEM, that the injection well was continually used after it had been thought to be out of service.

In April of 1983 a Consent Decree was issued for violations concerning a known contamination found at the Gemeinhardt location. The order was impart, to refund money to the state for water services provided to area residents and businesses, in the form of water main extension, water hook ups and bottled water for interim periods. The Decree also stated

**Assessment Update**  
**August 21, 1991**

that an investigation and remedial techniques were to be investigated and decided upon with cooperation with the state agency (IDEM).

In 1984 it was estimated that the contamination extended north, northwest for a distance of one mile. Which included the Bock Industries location. Poor housekeeping practices were observed at the Bock Industries site, and it was also found that TCE was used at this location.

In 1987, Honey RV, Hively Street, contamination was discovered at levels for TCE; 10 ppb. By this time ENSR, a firm from Boston Massachusetts, had begun work as the environmental engineer for Gemeinhardt. As many as sixteen nested monitor wells were placed at various locations throughout the area. Groundwater modeling was completed using these well locations. Attached you will find a map depicting the model of the presumed plume released in a document from ENSR, 1988.

Also in 1987, the Elkhart County Health Department began work on the Lusher Street Project. Again TCE was the main contaminant found. A sixteen block radius was established using Leininger Street, SR 19, 18th Street and Lusher Street as boundaries. It was established that 34% of the wells sampled were contaminated by TCE. The contaminated area included a portion of 17th Street, in that a residential well at 2205 17th was found to have TCE at levels above maximum contamination level (MCL) for drinking water. Again, it appears that the immediate action provided by the state and county was to provide hook up and access to public water. A source for the contamination was never established.

Department of Environmental Management and the Elkhart County Health Department. The amount of liability for costs is a legal question, and advise of legal counsel should be obtained. The amount of contamination in the area, and number of possible sources, as outlined above, make it increasingly difficult to establish an exact source.

Recommendations.

Continual sampling of the monitor wells has been agreed on previously, and may be appropriate at present. There are several approaches for more definitive answers for establishing the source of contamination. They may not be cost effective or even conclusive, but deserve consideration.

1. The information available at the state offices concerning Gemeinhardt and Bock has been updated since the report released in 1988. This information is available for review at the Indianapolis location for the IDEM. This may be done at a minimal cost.
2. The monitor wells in existence at Anco Products are singularly set for the depth of groundwater. TCE is not a floater. A nest of wells at different depths, should give a more accurate profile as to the extent of contamination.
3. A survey of the monitor wells would give an accurate depiction as to the slope and direction of groundwater flow.

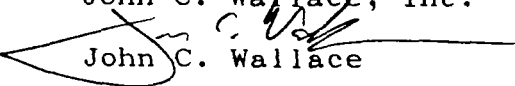


*Assessment Update*  
*August 21, 1991*

Thank you for allowing us to provide for your environmental concerns. Should there be any questions regarding the information contained herein, or if a cost estimate is desired for the above recommendations, please do not hesitate to contact my office at your earliest convenience.

Very truly yours,

John C. Wallace, Inc.



John C. Wallace

### Information Sources

Department of Environmental Management, Office of Solid Waste Management and Hazardous Waste Management, Site Investigation Section, CERCLIS Sites.

Indiana Department of Environmental Management, 5500 Bradbury Street, Indianapolis, Indiana (spill files).

Indiana Department of Environmental Management, Underground Storage Tank Program, 2321 Executive Drive, Indianapolis, Indiana.

Environmental Protection Agency, National Priority List, BNA Publications, National Contingency Section.

Guidance on landowner Liability under Section 107(a)(1) of CERCLA, and Settlements with Prospective Purchasers of Contaminated Property: MEMORANDUM; June 6, 1989; USEPA.

FOCUS "The Bulletin of Environmental Risk Evaluation and Management" Published for Hazardous Materials Institute, Inc., Columbus Ohio.

Hydrologic and Chemical Evaluation of the Groundwater Resources of Northern Elkhart, Investigations 81-53; October 1981.

Anco Assessment Documents, CHES Consultants; released May 12, 1989; Preliminary Assessment, June 20, 1989; sample results, and John C. Wallace, Inc.; released February 20 1990; UST Closure, July 19, 1991; Sharing of Information Notice, Mr. Harry Ackerman, Indiana Department of Environmental Management.

#### MAPS:

United States Department of the Interior Geological Survey, Eastern Elkhart Quadrangle (Topographical).

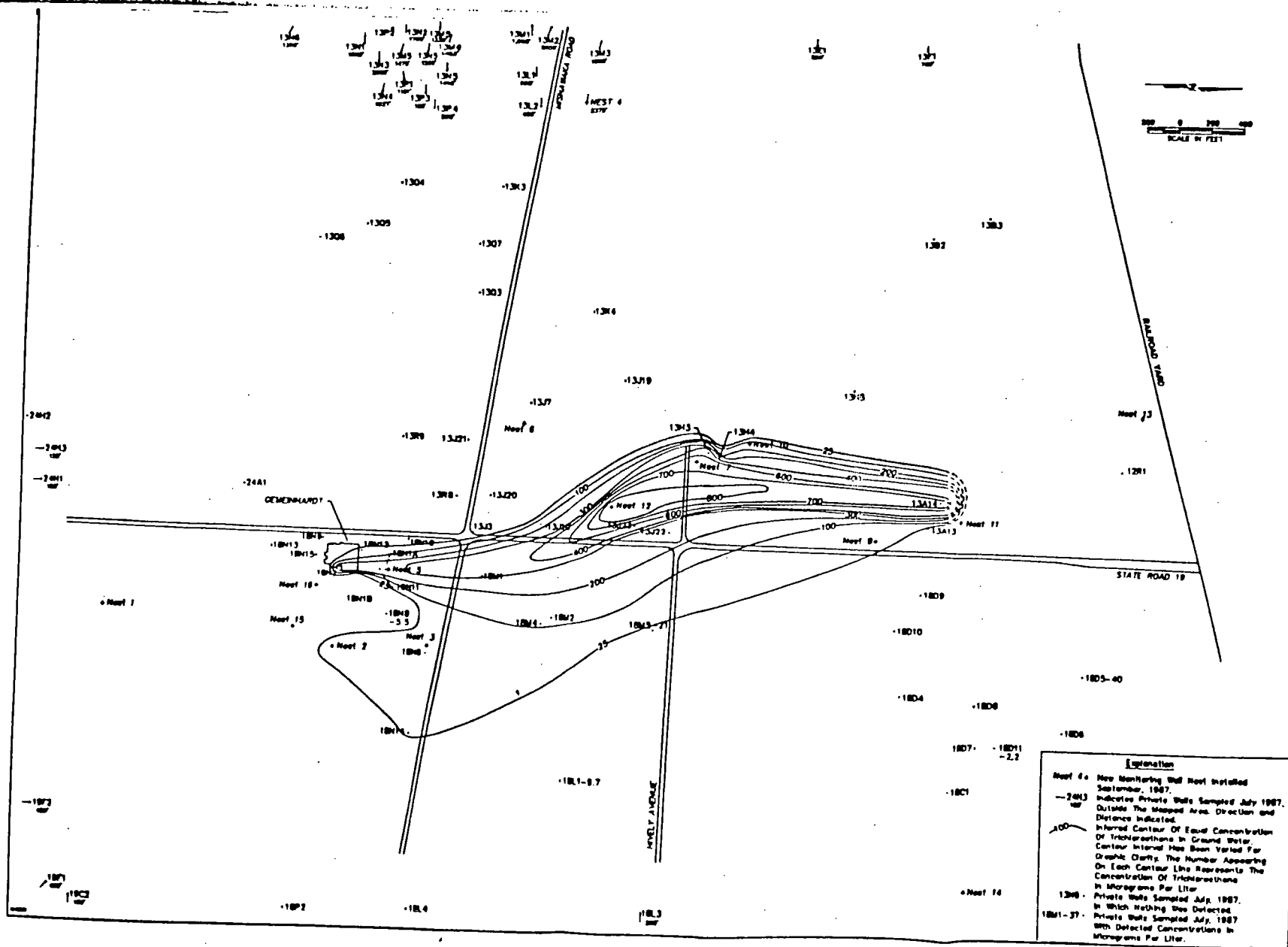


Figure 4-14  
Areal Distribution of Trichloroethene from  
February, 1988 Sampling of New Monitoring Well



# John C. Wallace, Inc.

*Environmental Consultant*

1215 Whitehall Drive

South Bend, Indiana 46615

Telephone 219-233-7141

July 24, 1991

Attn. Mr. Harry Ackerson  
IDEM  
Site Investigation Section  
105 S. Meridian  
Indianapolis, IN 46206-6013

RE: Information Sharing  
CERCLIS Sites:  
Gemeinhardt and Bock Industries  
Elkhart County  
Elkhart, Indiana

Dear Mr. Ackerson:

As stated during our phone conversation, July 17, 1991, certain information is available from four monitor wells at a property within approximately 1/4 mile of the area of the above mentioned CERCLIS Sites.

Anco Products, Inc., 2500 S. Seventeenth St., Elkhart, Indiana, is in the business of manufacturing insulated ducting. As part of a business program, unrelated to the concerns addressed in this writing, an environmental property assessment was conducted. Part of the assessment called for the installation of four (4) monitor wells. The monitor wells were placed in manner that would allow a subsurface investigation of the groundwater as it moved on-site (upgradient), and the impact, if any, that the manufacturing processes conducted at Anco Products would have.

In addition to sampling and analysis completed for compounds related to the manufacturing processes conducted at Anco Products, a solvent scan or method 601/02, were parameters also included in the analysis, in part, to determine the impact from adjacent and area manufacturing businesses. Anco Products, became aware of potential contamination during previous investigations of the CERCLIS Sites mentioned above and the Lusher Street investigation. Anco Products, Incorporated has never used Trichloroethylene (TCE) in their manufacturing processes, and asks that you assist them in determining the source and /or the responsible party.

You stated during our phone conversation that it is not uncommon to find TCE in the groundwater in the area. Anco Products, however, is quite concerned as to the impact that local businesses have had on the groundwater, and hopes that the sharing of this information will assist the IDEM in their investigation.

Enclosed you will find; well logs, results of sampling and analysis, and a site map (sketch) depicting monitor well placement.

Thank you for your time and consideration in this matter. If there are any questions regarding the information contained herein, please do not hesitate to contact my office at; 219, 233-7141.

Very truly yours,

John C. Wallace, Inc.

A handwritten signature in dark ink, appearing to read "J. C. Wallace", with a long horizontal flourish extending to the right.

John C. Wallace

Enclosures.

1103 South Bend Avenue  
South Bend, IN 46617  
219-233-6820

# COOK DRILLING COMPANY

EXHIBIT C  
2410 Weaver Rd.  
Niles, MI 49120  
616-584-6269

BORING NO.

Well #1

SHEET

1 of 5

PROJECT

ANCO

LOCATION

ELKHART Ind

DATE COMPLETED

June 7 '93

WEATHER

Sunny, hot

SURFACE ELEVATION

WATER DEPTH @ COMPLETION

14.5

AFTER 24 HRS

## FIELD BORE LOG

DEPTH (from Top)	METHOD	SAMPLE NO.	RECOV. ERY	SAMPLE INTERVAL	PENETRATION IN BLOW COUNT	DESCRIPTION, REMARKS, ETC.
---------------------	--------	---------------	---------------	--------------------	------------------------------	----------------------------

0.0-0.1	55	1	18	0.0-1.5	7 7 4	Sandy Top Soil
0.1-1.0	1	2	1	4.5-6.0	2 2 2	Med Dark Red fine med sand
1.0-4.8	1	3	1	9.0-10.5	4 6 10	Med Bay fine-med sand
4.8-7.2	1	4	1	13.0-15.0	3 4 5	Coarse Bay fine-med sand & gravel
7.2-14.0						Med. Bay - med-coarse sand - gravel
14.0-15.0						Loose Bay fine-med sand & gravel

LOGGED TO 13.0

SET WELL 13.0 TO 22.0. 5/25/93

LOG 0.0-0.30

RIG NO.

Cont 75

LOGGED BY

John M. Hinkle

BORING NO. Well #2 SHEET 2 OF 4  
PROJECT ANLO LOCATION ELKART Ind  
JOB NO. ANLO DATE COMPLETED June 7 99 WEATHER Sunny HOT  
SURFACE ELEVATION \_\_\_\_\_ WATER DEPTH • COMPLETION 14.5 15.3 T-Well AFTER 24 HRS \_\_\_\_\_

## FIELD BORING LOG

[illegible]



LOGGED BY

1103 South Bend Avenue  
South Bend, IN 46617  
219-233-6820

**COOK DRILLING COMPANY**

EXHIBIT C  
2410 Weaver Rd  
Niles, MI 49120  
616-684-6269

BORING NO. Well #4  
PROJECT ARCO  
JOB NO. ARCO  
DATE COMPLETED June 7 81  
WEATHER Sunny 160°  
SURFACE ELEVATION \_\_\_\_\_  
WATER DEPTH @ COMPLETION 138'  
AFTER 24 HRS \_\_\_\_\_

**FIELD BORING LOG**

DEPTH (From - To)	METHOD	SAMPLE NO.	RECOVERY	SAMPLE INTERVAL	PENETRATION IN BLOW COUNT	DESCRIPTION, REMARKS, ETC.
00 - 02	55	1	100	0.0-1.5	5	Asphalt
02 - 32	"	2	"	4.5-6.0	4	Med Ben fine - mid - Sand to gravel
32 - 47	"	3	"	9.0-10.5	4	DR Ben med coarse Sand - To 5.27 - 9m
47 - 104	"	4	"	13.8-150	3	Loose Ben med coarse Sand - gravel
104 - 138						Med Ben fine Sand
138 - 150						Med Ben - mud - coarse Sand - gravel
						190 to 230' Set Well Section
						190 to 230'

Sample description - Anco 1  
Anco tank assessment

Sample ID = 90-12-80-1


Parameter: Purgeables(601/02)

Date analyzed: December 17, 1990

Matrix: Water

Method: Purge & Trap

Compound	Concentration ug/l	Detection Limit ug/l
Dichlorodifluoromethane	ND	< 1.0
Chloromethane	ND	< 2.0
Vinyl chloride	ND	< 2.0
Chloroethane	ND	< 2.0
Bromoethane	ND	< 1.5
1,1-Dichloroethene	ND	< 0.4
Methylene chloride	ND	< 2.0
t-1,2-Dichloroethene	ND	< 0.2
1,1-Dichloroethane	ND	< 0.3
c-1,2-Dichloroethene	ND	< 0.2
Chloroform	ND	< 1.0
1,1,1-Trichloroethane	2.6	< 0.2
Carbon tetrachloride	ND	< 0.2
Benzene	ND	< 0.4
1,2-Dichloroethane	ND	< 0.2
Trichloroethene	8.9	< 0.5
1,2-Dichloropropane	ND	< 1.0
Bromodichloromethane	ND	< 0.5
2-Chloroethylvinyl ether	ND	< 0.5
t-1,3-Dichloropropene	ND	< 1.0
Toluene	ND	< 0.2
c-1,3-Dichloropropene	ND	< 1.0
1,1,2-Trichloroethane	ND	< 1.0
Tetrachloroethene	ND	< 1.0
Dibromochloromethane	ND	< 1.0
Chlorobenzene	ND	< 0.2
Ethylbenzene	ND	< 0.2
m+p-Xylene	ND	< 0.2
o-Xylene	ND	< 0.2
Bromoform	ND	< 0.9
1,1,2,2-Tetrachloroethane	ND	< 0.7
1,3-Dichlorobenzene	ND	< 0.4
1,4-Dichlorobenzene	ND	< 0.4
1,2-Dichlorobenzene	ND	< 0.4

  
Analyst: R. S. Lynch

**DIHYDRO ANALYTICAL SERVICES**

Dihydro Analytical Services, 4455 Fletcher Wayne, MI, (313) 595-0335

ADDITIONAL DIHYDRO  
SERVICES

Sample description - Anco 2  
Anco tank assessment

Sample ID = 90-12-80-2


Parameter: Purgeables(601/02)

Date analyzed: December 17, 1990

Matrix: Water

Method: Purge & Trap

Compound	Concentration ug/l	Detection Limit ug/l
Dichlorodifluoromethane	ND	< 1.0
Chloromethane	ND	< 2.0
Vinyl chloride	ND	< 2.0
Chloroethane	ND	< 2.0
Bromoethane	ND	< 1.5
1,1-Dichloroethene	ND	< 0.4
Methylene chloride	ND	< 2.0
t-1,2-Dichloroethene	ND	< 0.2
1,1-Dichloroethane	ND	< 0.3
c-1,2-Dichloroethene	ND	< 0.2
Chloroform	ND	< 1.0
1,1,1-Trichloroethane	4.7	< 0.2
Carbon tetrachloride	ND	< 0.2
Benzene	ND	< 0.4
1,2-Dichloroethane	ND	< 0.2
Trichloroethene	6.9	< 0.5
1,2-Dichloropropane	ND	< 1.0
Bromodichloromethane	ND	< 0.5
2-Chloroethylvinyl ether	ND	< 0.5
t-1,3-Dichloropropene	ND	< 1.0
Toluene	ND	< 0.2
c-1,3-Dichloropropene	ND	< 1.0
1,1,2-Trichloroethane	ND	< 1.0
Tetrachloroethene	ND	< 1.0
Dibromochloromethane	ND	< 1.0
Chlorobenzene	ND	< 0.2
Ethylbenzene	ND	< 0.2
m+p-Xylene	ND	< 0.2
o-Xylene	ND	< 0.2
Bromoform	ND	< 0.9
1,1,2,2-Tetrachloroethane	ND	< 0.7
1,3-Dichlorobenzene	ND	< 0.4
1,4-Dichlorobenzene	ND	< 0.4
1,2-Dichlorobenzene	ND	< 0.4

  
Analyst: R. S. Lynch

**DIHYDRO ANALYTICAL SERVICES**

Dihydro Analytical Services, 4455 Fletcher, Wayne, MI, (313) 595-0335

ADDITIONAL DIHYDRO  
SERVICES

Sample description - Anco 3  
Anco tank assessment

Sample ID = 90-12-80-3

Parameter: Purgeables(601/02)

Date analyzed: December 17, 1990

Matrix: Water

Method: Purge & Trap

Compound	Concentration ug/l	Detection Limit ug/l
Dichlorodifluoromethane	ND	< 1.0
Chloromethane	ND	< 2.0
Vinyl chloride	ND	< 2.0
Chloroethane	ND	< 2.0
Bromoethane	ND	< 1.5
1,1-Dichloroethene	ND	< 0.4
Methylene chloride	ND	< 2.0
t-1,2-Dichloroethene	ND	< 0.2
1,1-Dichloroethane	ND	< 0.3
c-1,2-Dichloroethene	ND	< 0.2
Chloroform	ND	< 1.0
1,1,1-Trichloroethane	ND	< 0.2
Carbon tetrachloride	ND	< 0.2
Benzene	ND	< 0.4
1,2-Dichloroethane	ND	< 0.2
Trichloroethene	81	< 0.5
1,2-Dichloropropane	ND	< 1.0
Bromodichloromethane	ND	< 0.5
2-Chloroethylvinyl ether	ND	< 0.5
t-1,3-Dichloropropene	ND	< 1.0
Toluene	ND	< 0.2
c-1,3-Dichloropropene	ND	< 1.0
1,1,2-Trichloroethane	ND	< 1.0
Tetrachloroethene	ND	< 1.0
Dibromochloromethane	ND	< 1.0
Chlorobenzene	ND	< 0.2
Ethylbenzene	ND	< 0.2
m+p-Xylene	ND	< 0.2
o-Xylene	ND	< 0.2
Bromoform	ND	< 0.9
1,1,2,2-Tetrachloroethane	ND	< 0.7
1,3-Dichlorobenzene	ND	< 0.4
1,4-Dichlorobenzene	ND	< 0.4
1,2-Dichlorobenzene	ND	< 0.4

  
Analyst: R. S. Lynch

**DIHYDRO ANALYTICAL SERVICES**

Dihydro Analytical Services, 4455 Fletcher, Wayne, MI, (313) 595-0335

A Division of DIHYDRO

Sample description - Method standard  
90-12-39/-43/-64/-80/-98

SAMPLE ID = MSpike  
Parameter: PURGEABLES(601&2)

Date analyzed: 12-17-90

Matrix: Water

Analyst: rsl

Compound	Mean ug/l	Spike ug/l	True Spike ug/l	% Recovery
Methylene chloride	0.0	25.1	21.2	118.6
1,1-Dichloroethane	0.0	24.5	21.8	112.3
Chloroform	0.0	24.8	23.0	107.8
1,1,1-Trichloroethane	0.0	24.4	23.1	105.6
1,2-Dichloroethane	0.0	26.8	22.6	118.7
Trichloroethene	0.0	25.3	25.6	98.8
1,2-Dichloropropane	0.0	22.1	22.5	98.4
Toluene	0.0	23.2	21.0	110.7
1,1,2-Trichloroethane	0.0	24.3	24.4	99.6
Tetrachloroethene	0.0	30.9	32.2	96.0
Chlorobenzene	0.0	18.5	22.5	82.4
Ethylbenzene	0.0	20.7	22.1	93.5
m+p-Xylene	0.0	20.5	21.2	96.8
o-Xylene	0.0	19.4	22.4	86.8
1,1,2,2-Tetrachloroethane	0.0	19.8	21.8	90.8
1,3-Dichlorobenzene	0.0	18.3	22.4	81.9
1,4-Dichlorobenzene	0.0	28.5	27.3	104.3
1,2-Dichlorobenzene	0.0	21.3	23.1	92.2

Sample description - Anco-1A MW-1  
Anco tank assessment

Sample ID = 91-01-148-1

Parameter: Purgeables(601/02)

Date analyzed: January 25, 1991

Matrix: Water

Method: Purge & Trap

Compound	Concentration ug/l	Detection Limit	
		ug/l	
Dichlorodifluoromethane	ND	<	1.0
Chloromethane	ND	<	2.0
Vinyl chloride	ND	<	2.0
Chloroethane	ND	<	2.0
Bromoethane	ND	<	1.5
1,1-Dichloroethene	ND	<	0.4
Methylene chloride	ND	<	2.0
t-1,2-Dichloroethene	ND	<	0.2
1,1-Dichloroethane	ND	<	0.3
c-1,2-Dichloroethene	ND	<	0.2
Chloroform	ND	<	1.0
1,1,1-Trichloroethane	4.8	<	0.2
Carbon tetrachloride	ND	<	0.2
Benzene	ND	<	0.4
1,2-Dichloroethane	ND	<	0.2
Trichloroethene	16	<	0.5
1,2-Dichloropropane	ND	<	1.0
Bromodichloromethane	ND	<	0.5
2-Chloroethylvinyl ether	ND	<	0.5
t-1,3-Dichloropropene	ND	<	1.0
Toluene	ND	<	0.2
c-1,3-Dichloropropene	ND	<	1.0
1,1,2-Trichloroethane	ND	<	1.0
Tetrachloroethene	ND	<	1.0
Dibromochloromethane	ND	<	1.0
Chlorobenzene	ND	<	0.2
Ethylbenzene	ND	<	0.2
m+p-Xylene	ND	<	0.2
o-Xylene	ND	<	0.2
Bromoform	ND	<	0.9
1,1,2,2-Tetrachloroethane	ND	<	0.7
1,3-Dichlorobenzene	ND	<	0.4
1,4-Dichlorobenzene	ND	<	0.4
1,2-Dichlorobenzene	ND	<	0.4

  
Analyst: R. S. Lynch

**DIHYDRO ANALYTICAL SERVICES**

Dihydro Analytical Services, 4455 Fletcher, Wayne, MI. (313) 595-0335

AD-1000 DIHYDRO

Sample description - Anco-2A MW-2  
Anco tank assessment

Sample ID = 91-01-148-2

Parameter: Purgeables(601/02)

Date analyzed: January 25, 1991

Matrix: Water

Method: Purge & Trap

Compound	Concentration ug/l	Detection Limit ug/l
Dichlorodifluoromethane	ND	< 1.0
Chloromethane	ND	< 2.0
Vinyl chloride	ND	< 2.0
Chloroethane	ND	< 2.0
Bromoethane	ND	< 1.5
1,1-Dichloroethene	ND	< 0.4
Methylene chloride	ND	< 2.0
t-1,2-Dichloroethene	ND	< 0.2
1,1-Dichloroethane	ND	< 0.3
c-1,2-Dichloroethene	ND	< 0.2
Chloroform	ND	< 1.0
1,1,1-Trichloroethane	6.0	< 0.2
Carbon tetrachloride	ND	< 0.2
Benzene	ND	< 0.4
1,2-Dichloroethane	ND	< 0.2
Trichloroethene	9.1	< 0.5
1,2-Dichloropropane	ND	< 1.0
Bromodichloromethane	ND	< 0.5
2-Chloroethylvinyl ether	ND	< 0.5
t-1,3-Dichloropropene	ND	< 1.0
Toluene	ND	< 0.2
c-1,3-Dichloropropene	ND	< 1.0
1,1,2-Trichloroethane	ND	< 1.0
Tetrachloroethene	1.1	< 1.0
Dibromochloromethane	ND	< 1.0
Chlorobenzene	ND	< 0.2
Ethylbenzene	ND	< 0.2
m+p-Xylene	ND	< 0.2
o-Xylene	ND	< 0.2
Bromoform	ND	< 0.9
1,1,2,2-Tetrachloroethane	ND	< 0.7
1,3-Dichlorobenzene	ND	< 0.4
1,4-Dichlorobenzene	ND	< 0.4
1,2-Dichlorobenzene	ND	< 0.4

  
Analyst: R. S. Lynch

**DIHYDRO ANALYTICAL SERVICES**

DiHydro Analytical Services, 4455 Fletcher, Wayne, MI. (313) 595-0335

AD-1000 DIHYDRO  
00000000



Sample description - Anco-3A MW-3  
Anco tank assessment

Sample ID = 91-01-148-3

Parameter: Purgeables(601/02)

Date analyzed: January 25, 1991

Matrix: Water

Method: Purge & Trap

Compound	Concentration	Detection
	ug/l	Limit
		ug/l
Dichlorodifluoromethane	ND	< 1.0
Chloromethane	ND	< 2.0
Vinyl chloride	ND	< 2.0
Chloroethane	ND	< 2.0
Bromoethane	ND	< 1.5
1,1-Dichloroethene	ND	< 0.4
Methylene chloride	ND	< 2.0
t-1,2-Dichloroethene	ND	< 0.2
1,1-Dichloroethane	ND	< 0.3
c-1,2-Dichloroethene	ND	< 0.2
Chloroform	ND	< 1.0
1,1,1-Trichloroethane	ND	< 0.2
Carbon tetrachloride	ND	< 0.2
Benzene	ND	< 0.4
1,2-Dichloroethane	ND	< 0.2
Trichloroethene	87	< 0.5
1,2-Dichloropropane	ND	< 1.0
Bromodichloromethane	ND	< 0.5
2-Chloroethylvinyl ether	ND	< 0.5
t-1,3-Dichloropropene	ND	< 1.0
Toluene	ND	< 0.2
c-1,3-Dichloropropene	ND	< 1.0
1,1,2-Trichloroethane	ND	< 1.0
Tetrachloroethene	ND	< 1.0
Dibromochloromethane	ND	< 1.0
Chlorobenzene	ND	< 0.2
Ethylbenzene	ND	< 0.2
m+p-Xylene	ND	< 0.2
o-Xylene	ND	< 0.2
Bromoform	ND	< 0.9
1,1,2,2-Tetrachloroethane	ND	< 0.7
1,3-Dichlorobenzene	ND	< 0.4
1,4-Dichlorobenzene	ND	< 0.4
1,2-Dichlorobenzene	ND	< 0.4

  
Analyst: R. S. Lynch

**DIHYDRO ANALYTICAL SERVICES**

Dihydro Analytical Services, 4455 Fletcher, Wayne, MI, (313) 595-0335

DIHYDRO  
ANALYTICAL

Sample description - Anco 4A MW-4  
Anco tank assessment

Sample ID = 91-01-148A-4


Parameter: Purgeables(601/02)

Date analyzed: February 18, 1991

Matrix: Water

Method: Purge & Trap

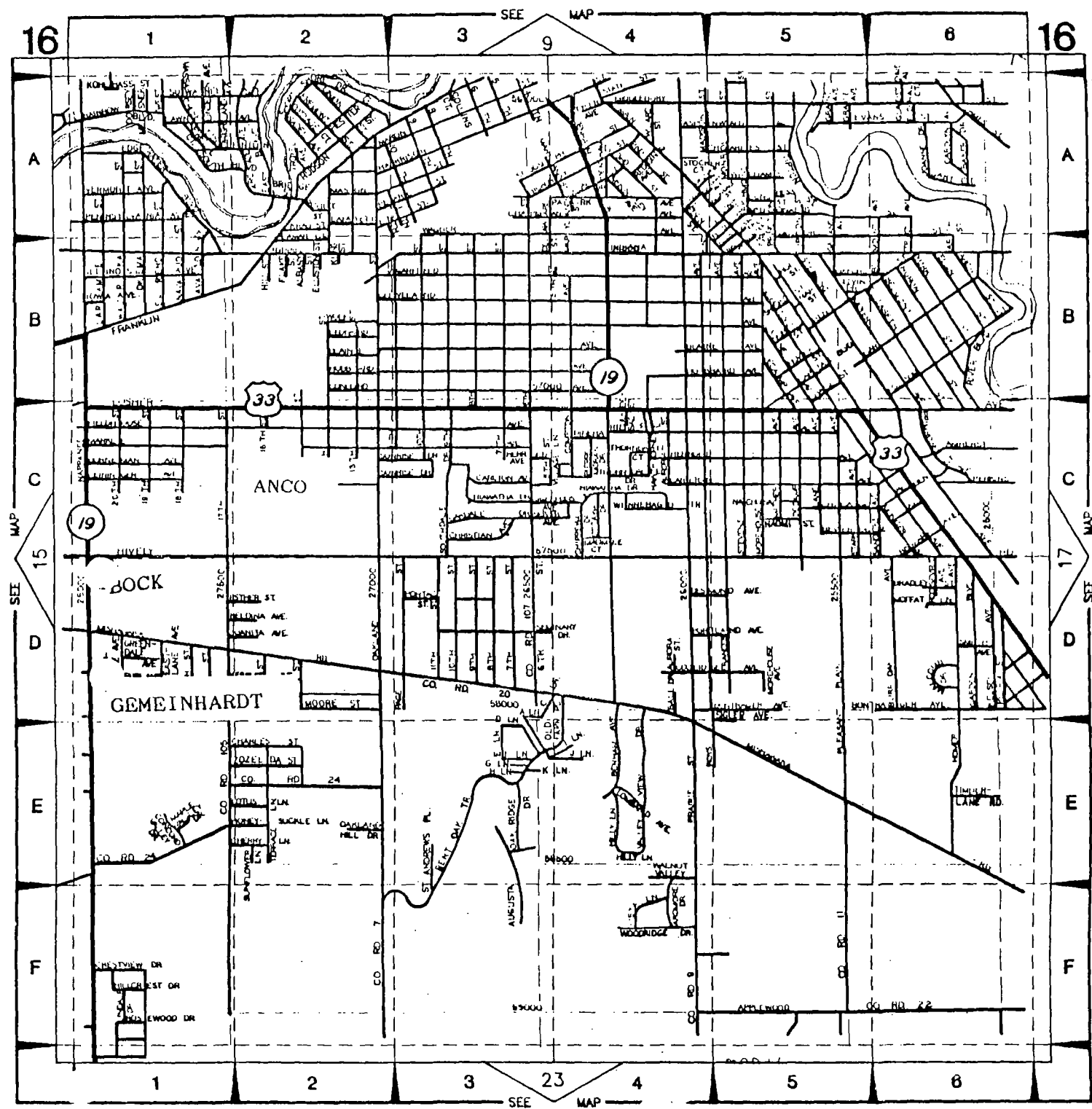
Compound	Concentration ug/l	Detection Limit ug/l
Dichlorodifluoromethane	ND	< 1.0
Chloromethane	ND	< 2.0
Vinyl chloride	ND	< 2.0
Chloroethane	ND	< 2.0
Bromoethane	ND	< 1.5
1,1-Dichloroethene	ND	< 0.4
Methylene chloride	ND	< 2.0
t-1,2-Dichloroethene	ND	< 0.2
1,1-Dichloroethane	ND	< 0.3
c-1,2-Dichloroethene	ND	< 0.2
Chloroform	ND	< 1.0
1,1,1-Trichloroethane	ND	< 0.2
Carbon tetrachloride	ND	< 0.2
Benzene	ND	< 0.4
1,2-Dichloroethane	ND	< 0.2
Trichloroethene	21	< 0.5
1,2-Dichloropropane	ND	< 1.0
Bromodichloromethane	ND	< 0.5
2-Chloroethylvinyl ether	ND	< 0.5
t-1,3-Dichloropropene	ND	< 1.0
Toluene	ND	< 0.2
c-1,3-Dichloropropene	ND	< 1.0
1,1,2-Trichloroethane	ND	< 1.0
Tetrachloroethene	ND	< 1.0
Dibromochloromethane	ND	< 1.0
Chlorobenzene	ND	< 0.2
Ethylbenzene	ND	< 0.2
m+p-Xylene	ND	< 0.2
o-Xylene	ND	< 0.2
Bromoform	ND	< 0.9
1,1,2,2-Tetrachloroethane	ND	< 0.7
1,3-Dichlorobenzene	ND	< 0.4
1,4-Dichlorobenzene	ND	< 0.4
1,2-Dichlorobenzene	ND	< 0.4

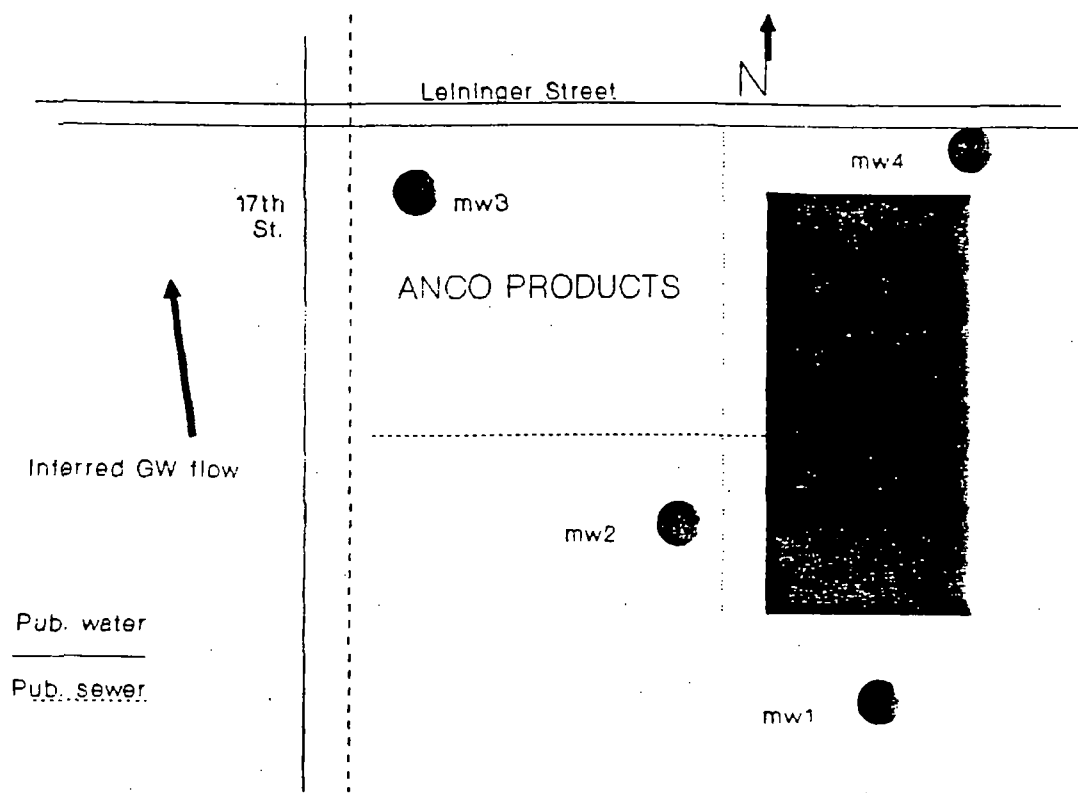
  
Analyst: R. S. Lynch

**DIHYDRO ANALYTICAL SERVICES**

Dihydro Analytical Services, 4455 Fletcher, Wayne, MI, (313) 595-0335

A Division of **DIHYDRO**







**Anco Products, Incorporated  
2500 South 17th Street  
Elkhart, Indiana 46517**

**TCE, TCA Findings**

**As Prepared By:**

***Industrial Safety and Environmental Services*  
716 Lincolnway West  
Osceola, Indiana 46561**

**I**NDUSTRIAL  
**S**AFETY AND  
**E**NVIRONMENTAL  
**S**ERVICES

P.O. BOX 233 • OSCEOLA, IN 46561 • PHONE: (219) 259-4138

---

Mr. Howard Tomlinson  
Anco Products, Incorporated  
2500 South 17th Street  
Elkhart, Indiana 46517

February 24, 1994

Dear Howard:

On February 4, 1994, the annual sampling of the four (4) monitoring wells at Anco Products (Anco), Incorporated for Volatile organic Compounds (VOC's) was conducted. The annual sampling was recommended by Industrial Safety and Environmental Services (ISES) in the Continuing Investigation Report provided to Anco from ISES.

The attached report is intended to provide an overview of the field investigation performed at Anco.

If you have any questions regarding the information provided, please feel free to contact me at your convenience.

Very Truly Yours,

*Dana Simpson*

Dana Simpson  
Industrial Safety and Environmental Services

## 1. Introduction

As part of a continuing investigation at Anco Products, Incorporated, 2500 South 17th Street, Elkhart, Indiana, (Project Site), Industrial Safety and Environmental Services (ISES) was retained to assess current groundwater conditions following the closure in 1990 of two (2) underground storage tanks (USTs) located at the project site. Trichloroethylene (TCE) and 1,1,1-Trichloroethane (TCA) were found to be impacting the groundwater at the project site. Since Anco has not used TCE or TCA in their associated industrial processes it would be highly unlikely that Anco would be the source point of contamination. It is because of this that it is believed the migration of TCE and TCA are from an off-site source. An annual sampling program was established for the four (4) monitoring wells installed in 1990 at the project site to monitor that migration.

## II. Monitoring Well Sampling

On February 4, 1994, a representative from ISES arrived at the project site for the purpose of collecting groundwater samples from the four (4) monitoring wells. A site map depicting the locations of the four (4) monitoring wells is contained in **Figure II-I**. The samples were collected, labeled, packed on ice and sent to Brighton Analytical, Brighton, Michigan for analysis. The samples were analyzed for Volatile Organic Compounds (VOC's).

During the same site visit, static water levels of the monitoring wells were recorded. The static water levels for February 4, 1994 are contained in **Table II-I**, and the static water levels for March 25, 1993, are contained in **Table II-II** for comparison purposes. A minimum of six (6) well volumes were purged from the monitoring wells due to high solids content.

The monitoring wells (MW) were sampled in the order of MW one (1), MW two (2), MW three (3), and MW four (4), respectively. Sample collection was accomplished using a Teflon Bailer. All field equipment was decontaminated using distilled water for the final rinse.

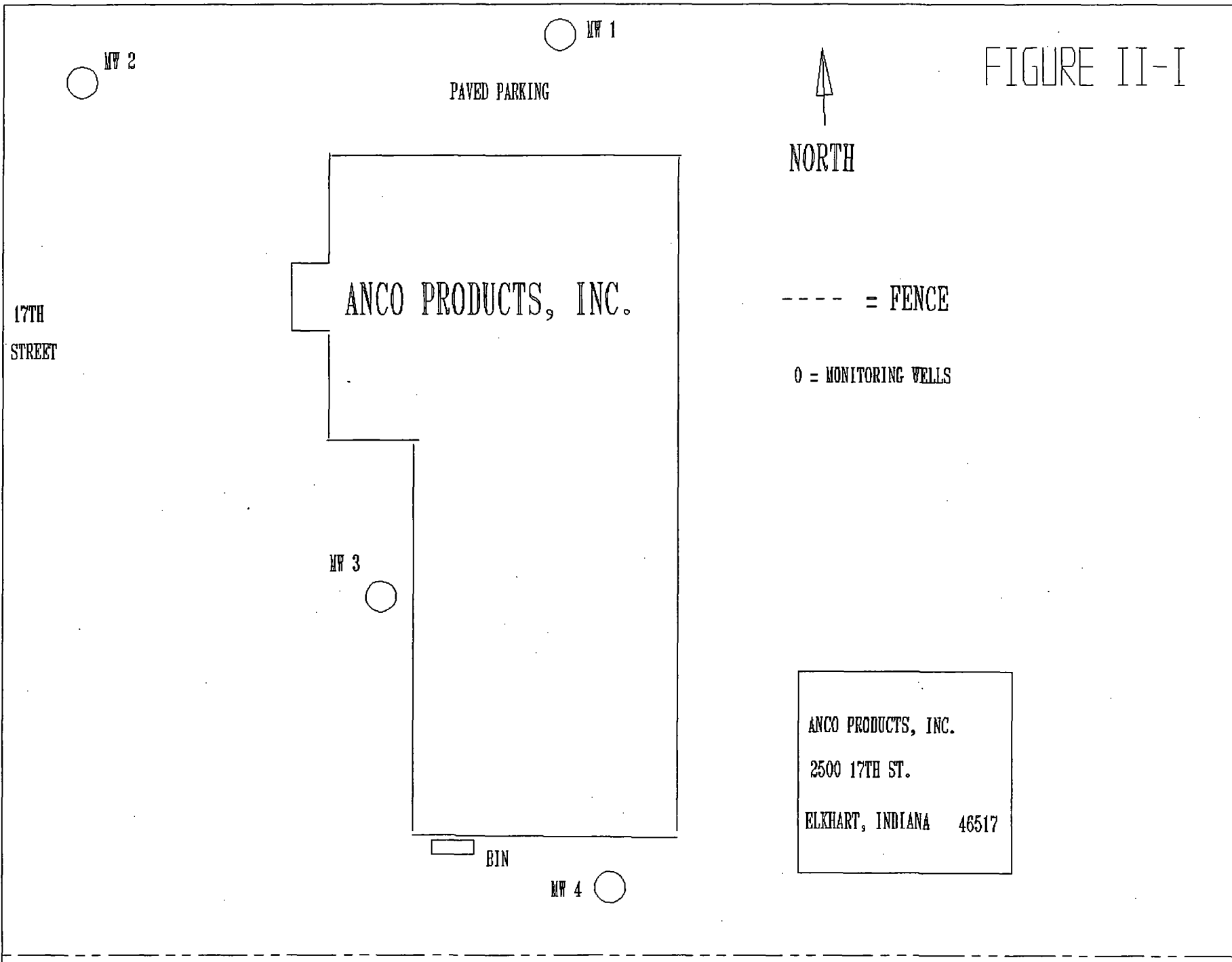
## III. Conclusions

Positive groundwater results are contained in **Table III-I**. For comparison purposes, Table III-I also contains the positive groundwater results from 1990, 1991, and 1993. These



results are provided for comparison purposes. The laboratory analytical results for February 4, 1994 are attached in **Appendix I**.

The results from the sampling analysis suggest that the positive sampling results of TCE and TCA could be gradually leaving the project site. It is recommended that the monitoring wells be sampled biannually to continue to evaluate the water quality and the movement of the TCE and the TCA.



**ANCO PRODUCTS, INCORPORATED****TABLE II-I****FEBRUARY 4, 1994****Monitoring Well Elevation (Feet)**

<b><u>Monitor Well</u></b>	<b><u>Static Level</u></b>	<b><u>Top of PVC to Ground Level</u></b>	<b><u>Top of PVC to Bottom of Monitoring Well</u></b>
MW1	12.5'	N/A	24.12'
MW2	15.0'	2.7 1/2'	26.3'
MW3	15.2'	2.8'	27.1'
MW4	13.9'	2.9'	26.1'

Weather Conditions: 31 Degrees  
Cloudy

**ANCO PRODUCTS, INCORPORATED  
ELKHART, INDIANA**

**MONITORING WELL ELEVATION (FEET)**

**MARCH 25, 1993**

<u>MONITOR WELL</u>	<u>STATIC LEVEL</u>	<u>TOP OF PVC TO GROUND</u>	<u>TOP OF PVC TO BOTTOM OF THE MONITOR WELL</u>
MW 1	12.5	N/A	23.35
MW 2	15.0	2.75	25.6
MW 3	15.2	2.8	25.4
MW 4	13.9	2.9	25.6

**WEATHER CONDITIONS: 50 DEGREES; CLOUDY**

**ANCO PRODUCTS, INCORPORATED  
SAMPLE ANALYSIS COMPARISON**

**TABLE III-I**

**POSITIVE GROUNDWATER SAMPLING RESULTS**

**1990 RESULTS**

	MW 1	MW 2	MW 3	MW 4
TCE	22	81	6.9	8.9
TCA	ND	ND	4.7	2.6

**1991 RESULTS**

	MW 1	MW 2	MW 3	MW 4
TCE	13	8.5	64	20
TCA	9.8	3.1	ND	1.2

**1993 RESULTS**

	MW 1	MW 2	MW 3	MW 4
TCE	17	38	6.8	14
TCA	ND	ND	3.1	3.6

**1994 RESULTS**

	MW 1	MW 2	MW 3	MW 4
TCE	22	22	5	11
TCA	ND	ND	3	1

**Brighton Analytical, Inc.**

718 Advance Street

Brighton, Michigan 48116

Phone: (810)229-7575 FAX: (810)229-8650

Date: 02/14/94

Date Submitted: 02/08/94

Date Sampled: 02/04/94

To: Industrial Safety &amp; Envir.

P.O. Box 233

716 Lincolnway West

Osceola, IN 46561

BA Report Number: 7650

Project Name: ANCO Products MW Sampling (Annual)

Sample ID: MW-1

BA Sample ID: AD01680

Project Number:

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
<b>Volatile Analysis</b>						
Bromodichloromethane	Not detected	ug/L	1	SW846 8260	MC	02/10/94
Bromoform	Not detected	ug/L	1	SW846 8260	MC	02/10/94
Bromomethane	Not detected	ug/L	1	SW846 8260	MC	02/10/94
Carbon tetrachloride	Not detected	ug/L	1	SW846 8260	MC	02/10/94
Chlorobenzene	Not detected	ug/L	1	SW846 8260	MC	02/10/94
Chloroethane	Not detected	ug/L	1	SW846 8260	MC	02/10/94
2-Chloroethyl vinyl ether	Not detected	ug/L	1	SW846 8260	MC	02/10/94
Chloroform	Not detected	ug/L	1	SW846 8260	MC	02/10/94
Chloromethane	Not detected	ug/L	1	SW846 8260	MC	02/10/94
Chlorodibromomethane	Not detected	ug/L	1	SW846 8260	MC	02/10/94
1,2-Dichlorobenzene	Not detected	ug/L	1	SW846 8260	MC	02/10/94
1,3-Dichlorobenzene	Not detected	ug/L	1	SW846 8260	MC	02/10/94
1,4-Dichlorobenzene	Not detected	ug/L	1	SW846 8260	MC	02/10/94
Dichlorodifluoromethane	Not detected	ug/L	1	SW846 8260	MC	02/10/94
1,1-Dichloroethane	Not detected	ug/L	1	SW846 8260	MC	02/10/94
1,2-Dichloroethane	Not detected	ug/L	1	SW846 8260	MC	02/10/94

BA Report Number: 7650

Project Name: ANCO Products MW Sampling (Annual)

Sample ID: MW-1

BA Sample ID: AD01680

Project Number:

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
1,1-Dichloroethene	Not detected	ug/L	1	SW846 8260	MC	02/10/94
cis,trans-1,2-Dichloroethene	Not detected	ug/L	1	SW846 8260	MC	02/10/94
1,2-Dichloropropane	Not detected	ug/L	1	SW846 8260	MC	02/10/94
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW846 8260	MC	02/10/94
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW846 8260	MC	02/10/94
Methylene chloride	Not detected	ug/L	1	SW846 8260	MC	02/10/94
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW846 8260	MC	02/10/94
Tetrachloroethene	Not detected	ug/L	1	SW846 8260	MC	02/10/94
1,1,1-Trichloroethane	Not detected	ug/L	1	SW846 8260	MC	02/10/94
1,1,2-Trichloroethane	Not detected	ug/L	1	SW846 8260	MC	02/10/94
Trichloroethene	22	ug/L	1	SW846 8260	MC	02/10/94
Trichlorofluoromethane	Not detected	ug/L	1	SW846 8260	MC	02/10/94
Vinyl chloride	Not detected	ug/L	1	SW846 8260	MC	02/10/94
Benzene	Not detected	ug/L	1	SW846 8260	MC	02/10/94
Toluene	Not detected	ug/L	1	SW846 8260	MC	02/10/94
Ethyl Benzene	Not detected	ug/L	1	SW846 8260	MC	02/10/94
Xylenes	Not detected	ug/L	3	SW846 8260	MC	02/10/94

DL=Detection Limit

Released by: Jeff TopolskiDate: 2/14/94



**Brighton Analytical, Inc.**

718 Advance Street  
Brighton, Michigan 48116  
Phone: (810)229-7575 FAX: (810)229-8650

Date: 02/14/94

Date Submitted: 02/08/94

Date Sampled: 02/04/94

To: Industrial Safety & Envir.  
P.O. Box 233  
716 Lincolnway West  
Osceola, IN 46561

BA Report Number: 7650

Project Name: ANCO Products MW Sampling (Annual)

Sample ID: MW-2

BA Sample ID: AD01681

Project Number:

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
<b>Volatile Analysis</b>						
Bromodichloromethane	Not detected	ug/L	1	SW846 8260	MC	02/10/94
Bromoform	Not detected	ug/L	1	SW846 8260	MC	02/10/94
Bromomethane	Not detected	ug/L	1	SW846 8260	MC	02/10/94
Carbon tetrachloride	Not detected	ug/L	1	SW846 8260	MC	02/10/94
Chlorobenzene	Not detected	ug/L	1	SW846 8260	MC	02/10/94
Chloroethane	Not detected	ug/L	1	SW846 8260	MC	02/10/94
2-Chloroethyl vinyl ether	Not detected	ug/L	1	SW846 8260	MC	02/10/94
Chloroform	Not detected	ug/L	1	SW846 8260	MC	02/10/94
Chloromethane	Not detected	ug/L	1	SW846 8260	MC	02/10/94
Chlorodibromomethane	Not detected	ug/L	1	SW846 8260	MC	02/10/94
1,2-Dichlorobenzene	Not detected	ug/L	1	SW846 8260	MC	02/10/94
1,3-Dichlorobenzene	Not detected	ug/L	1	SW846 8260	MC	02/10/94
1,4-Dichlorobenzene	Not detected	ug/L	1	SW846 8260	MC	02/10/94
Dichlorodifluoromethane	Not detected	ug/L	1	SW846 8260	MC	02/10/94
1,1-Dichloroethane	Not detected	ug/L	1	SW846 8260	MC	02/10/94
1,2-Dichloroethane	Not detected	ug/L	1	SW846 8260	MC	02/10/94



BA Report Number: 7650

Project Name: ANCO Products MW Sampling (Annual)

Sample ID: MW-2

BA Sample ID: AD01681

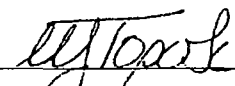
Project Number:

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
1,1-Dichloroethene	Not detected	ug/L	1	SW846 8260	MC	02/10/94
cis,trans-1,2-Dichloroethene	Not detected	ug/L	1	SW846 8260	MC	02/10/94
1,2-Dichloropropane	Not detected	ug/L	1	SW846 8260	MC	02/10/94
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW846 8260	MC	02/10/94
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW846 8260	MC	02/10/94
Methylene chloride	Not detected	ug/L	1	SW846 8260	MC	02/10/94
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW846 8260	MC	02/10/94
Tetrachloroethene	Not detected	ug/L	1	SW846 8260	MC	02/10/94
1,1,1-Trichloroethane	Not detected	ug/L	1	SW846 8260	MC	02/10/94
1,1,2-Trichloroethane	Not detected	ug/L	1	SW846 8260	MC	02/10/94
Trichloroethene	22	ug/L	1	SW846 8260	MC	02/10/94
Trichlorofluoromethane	Not detected	ug/L	1	SW846 8260	MC	02/10/94
Vinyl chloride	Not detected	ug/L	1	SW846 8260	MC	02/10/94
Benzene	Not detected	ug/L	1	SW846 8260	MC	02/10/94
Toluene	Not detected	ug/L	1	SW846 8260	MC	02/10/94
Ethyl Benzene	Not detected	ug/L	1	SW846 8260	MC	02/10/94
Xylenes	Not detected	ug/L	3	SW846 8260	MC	02/10/94

DL= Detection Limit

Released by:

Date:

  
2/14/94



## Brighton Analytical, Inc.

718 Advance Street

Brighton, Michigan 48116

Phone: (810)229-7575 FAX: (810)229-8650

Date: 02/14/94

Date Submitted: 02/08/94

Date Sampled: 02/04/94

To: Industrial Safety & Envir.

P.O. Box 233

716 Lincolnway West

Osceola, IN 46561

BA Report Number: 7650

Project Name: ANCO Products MW Sampling (Annual)

Sample ID: MW-3

BA Sample ID: AD01682

Project Number:

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
<b>Volatile Analysis</b>						
Bromodichloromethane	Not detected	ug/L	1	SW846 8260	MC	02/10/94
Bromoform	Not detected	ug/L	1	SW846 8260	MC	02/10/94
Bromomethane	Not detected	ug/L	1	SW846 8260	MC	02/10/94
Carbon tetrachloride	Not detected	ug/L	1	SW846 8260	MC	02/10/94
Chlorobenzene	Not detected	ug/L	1	SW846 8260	MC	02/10/94
Chloroethane	Not detected	ug/L	1	SW846 8260	MC	02/10/94
2-Chloroethyl vinyl ether	Not detected	ug/L	1	SW846 8260	MC	02/10/94
Chloroform	Not detected	ug/L	1	SW846 8260	MC	02/10/94
Chloromethane	Not detected	ug/L	1	SW846 8260	MC	02/10/94
Chlorodibromomethane	Not detected	ug/L	1	SW846 8260	MC	02/10/94
1,2-Dichlorobenzene	Not detected	ug/L	1	SW846 8260	MC	02/10/94
1,3-Dichlorobenzene	Not detected	ug/L	1	SW846 8260	MC	02/10/94
1,4-Dichlorobenzene	Not detected	ug/L	1	SW846 8260	MC	02/10/94
Dichlorodifluoromethane	Not detected	ug/L	1	SW846 8260	MC	02/10/94
1,1-Dichloroethane	Not detected	ug/L	1	SW846 8260	MC	02/10/94
1,2-Dichloroethane	Not detected	ug/L	1	SW846 8260	MC	02/10/94

BA Report Number: 7650

Project Name: ANCO Products MW Sampling (Annual)

Sample ID: MW-3

BA Sample ID: AD01682

Project Number:

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
1,1-Dichloroethene	Not detected	ug/L	1	SW846 8260	MC	02/10/94
cis,trans-1,2-Dichloroethene	Not detected	ug/L	1	SW846 8260	MC	02/10/94
1,2-Dichloropropane	Not detected	ug/L	1	SW846 8260	MC	02/10/94
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW846 8260	MC	02/10/94
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW846 8260	MC	02/10/94
Methylene chloride	Not detected	ug/L	1	SW846 8260	MC	02/10/94
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW846 8260	MC	02/10/94
Tetrachloroethene	Not detected	ug/L	1	SW846 8260	MC	02/10/94
1,1,1-Trichloroethane	3	ug/L	1	SW846 8260	MC	02/10/94
1,1,2-Trichloroethane	Not detected	ug/L	1	SW846 8260	MC	02/10/94
Trichloroethene	5	ug/L	1	SW846 8260	MC	02/10/94
Trichlorofluoromethane	Not detected	ug/L	1	SW846 8260	MC	02/10/94
Vinyl chloride	Not detected	ug/L	1	SW846 8260	MC	02/10/94
Benzene	Not detected	ug/L	1	SW846 8260	MC	02/10/94
Toluene	Not detected	ug/L	1	SW846 8260	MC	02/10/94
Ethyl Benzene	Not detected	ug/L	1	SW846 8260	MC	02/10/94
Xylenes	Not detected	ug/L	3	SW846 8260	MC	02/10/94

DL=Detection Limit

Released by: Jeff TopolskiDate: 2/14/94



**Brighton Analytical, Inc.**

718 Advance Street

Brighton, Michigan 48116

Phone: (810)229-7575 FAX: (810)229-8650

Date: 02/14/94

Date Submitted: 02/08/94

Date Sampled: 02/04/94

To: Industrial Safety & Envir.

P.O. Box 233

716 Lincolnway West

Osceola, IN 46561

BA Report Number: 7650

Project Name: ANCO Products MW Sampling (Annual)

Sample ID: MW-4

BA Sample ID: AD01683

Project Number:

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
<b>Volatile Analysis</b>						
Bromodichloromethane	Not detected	ug/L	1	SW846 8260	MC	02/10/94
Bromoform	Not detected	ug/L	1	SW846 8260	MC	02/10/94
Bromomethane	Not detected	ug/L	1	SW846 8260	MC	02/10/94
Carbon tetrachloride	Not detected	ug/L	1	SW846 8260	MC	02/10/94
Chlorobenzene	Not detected	ug/L	1	SW846 8260	MC	02/10/94
Chloroethane	Not detected	ug/L	1	SW846 8260	MC	02/10/94
2-Chloroethyl vinyl ether	Not detected	ug/L	1	SW846 8260	MC	02/10/94
Chloroform	Not detected	ug/L	1	SW846 8260	MC	02/10/94
Chloromethane	Not detected	ug/L	1	SW846 8260	MC	02/10/94
Chlorodibromomethane	Not detected	ug/L	1	SW846 8260	MC	02/10/94
1,2-Dichlorobenzene	Not detected	ug/L	1	SW846 8260	MC	02/10/94
1,3-Dichlorobenzene	Not detected	ug/L	1	SW846 8260	MC	02/10/94
1,4-Dichlorobenzene	Not detected	ug/L	1	SW846 8260	MC	02/10/94
Dichlorodifluoromethane	Not detected	ug/L	1	SW846 8260	MC	02/10/94
1,1-Dichloroethane	Not detected	ug/L	1	SW846 8260	MC	02/10/94
1,2-Dichloroethane	Not detected	ug/L	1	SW846 8260	MC	02/10/94

BA Report Number: 7650

Project Name: ANCO Products MW Sampling (Annual)

Sample ID: MW-4

BA Sample ID: AD01683

Project Number:

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
1,1-Dichloroethene	Not detected	ug/L	1	SW846 8260	MC	02/10/94
cis,trans-1,2-Dichloroethene	Not detected	ug/L	1	SW846 8260	MC	02/10/94
1,2-Dichloropropane	Not detected	ug/L	1	SW846 8260	MC	02/10/94
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW846 8260	MC	02/10/94
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW846 8260	MC	02/10/94
Methylene chloride	Not detected	ug/L	1	SW846 8260	MC	02/10/94
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW846 8260	MC	02/10/94
Tetrachloroethene	Not detected	ug/L	1	SW846 8260	MC	02/10/94
1,1,1-Trichloroethane	1	ug/L	1	SW846 8260	MC	02/10/94
1,1,2-Trichloroethane	Not detected	ug/L	1	SW846 8260	MC	02/10/94
Trichloroethene	11	ug/L	1	SW846 8260	MC	02/10/94
Trichlorofluoromethane	Not detected	ug/L	1	SW846 8260	MC	02/10/94
Vinyl chloride	Not detected	ug/L	1	SW846 8260	MC	02/10/94
Benzene	Not detected	ug/L	1	SW846 8260	MC	02/10/94
Toluene	Not detected	ug/L	1	SW846 8260	MC	02/10/94
Ethyl Benzene	Not detected	ug/L	1	SW846 8260	MC	02/10/94
Xylenes	Not detected	ug/L	3	SW846 8260	MC	02/10/94

DL=Detection Limit

Released by:                     Date:

718 Advance St. • Brighton, MI 48116  
Phone: (313) 229-7575 • Fax: (313) 229-8650

## CHAIN-OF-CUSTODY

DATE: Feb. 4, 1994

P.O.# \_\_\_\_\_

COMPANY: ISES PROJECT #: \_\_\_\_\_

PROJECT NAME: ANCO PRODUCTS MW SAMPLING (ANNUAL) RESULTS TO: DANA SIMPSON

TURN-AROUND: ☐ 48 HOUR RUSH ☐ surcharge applies

### PARAMETERS

☒ STANDARD 14 DAYS ☐ ONE WEEK surcharge applies

SAMPLE DESIGNATION	DATE SAMPLED	MATRIX	LOCATION	# OF CONTAIN	VOC (MIL/100)							LAB ID
MW 1	2/4/94;8:45	W	ANCO PRODUCTS	2	X							01680
MW 2	2/4/94;9:10	W	ANCO PRODUCTS	2	X							01681
MW 3	2/4/94;9:40	W	ANCO PRODUCTS	2	X							01682
MW 4	2/4/94;10:00	W	ANCO PRODUCTS	2	X							01683

SPECIAL INSTRUCTIONS: Dana Simpson

RELINQUISHED BY: DANA SIMPSON DATE: 2/4/94 TIME: 11:30

RECEIVED BY: VIA Express (C) Waller 2/8/94 11:30 AM

RELINQUISHED BY: \_\_\_\_\_ DATE: \_\_\_\_\_ TIME: \_\_\_\_\_

RECEIVED BY: \_\_\_\_\_



**Anco Products Inc.  
2500 South 17th Street  
Elkhart, Indiana**

**Groundwater Sampling and Analysis**

***As Prepared May 11, 1995 By:  
Industrial Safety and Environmental Services (ISES)  
716 Lincoln Way West  
Osceola, Indiana 46561***



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## **Executive Summary**

### **Conclusions**

1. The levels of contamination in the samples are approximately equal to those from the previous sampling. Historically, levels have generally decreased over time.
2. Tetrahydrofuran (THF) was detected in a sample collected from monitoring well one. The well was recently repaired with a THF containing glue. It is the opinion of ISES that the source of the THF in the groundwater sample is most likely the glue used to repair the well.

### **Recommendations**

1. The locks have been removed from the wells and could not be located. ISES recommends that new locks be purchased and be used to secure the monitoring wells. The locks are necessary to ensure that access to the wells is limited to Anco approved personnel.
2. Levels of contamination are still sufficient to pose an environmental detriment to the value of the Anco property. ISES recommends that the annual sampling and analysis of groundwater continue.
3. The presence of THF in the groundwater sample should not be considered serious as the concentration is low and the likely source is small in quantity. No Federal Drinking Water standard exists for the THF. THF will most likely be undetectable in next years samples if the source was the glue.

## **I. Introduction**

This report was generated by Industrial Safety & Environmental Services (ISES), Osceola, Indiana, for Anco Products Inc. (Anco), Elkhart, Indiana. Annual sampling of the monitoring wells was recommended during the course of environmental studies performed at Anco.

This report was written to report the results from the sampling of the groundwater performed on April 3rd and 14th, 1995.

## **II. Monitoring Well Conditions**

On April 3, 1995, all of the monitoring wells were inspected prior to sampling to ascertain their condition. The wells were closed and not open to the elements. Several problem areas were identified.

It was observed that Monitoring well number one (MW #1) had been damaged. The metal cover of the well was missing and the area above the well and throughout the casing was filled with debris. The well cap was crushed onto the wellhead and could not be removed by hand.

ISES did not sample from MW #1 on the initial sampling date. Gary Luft at Anco was informed of the damage to the well. Mr. Luft informed ISES personnel that he would arrange for the repair of the well.

It was also observed that the wells were missing locks. The wells should be locked to prevent their misuse. It is not known who removed the locks or where they may be. A recommendation to this affect is included in **Section VI** of this document.

On April 14, 1994, ISES assessed the condition of MW #1. The well appeared to be repaired, however, it could not be discerned if the well had been repaired with glue. The use of glue to repair the well can cause contamination of samples collected from the well.

### **III. Measurement of Static Water Levels**

The static water level in the wells was measured before the wells were purged. The measurement was performed using a Model 51453 Water Level Indicator manufactured by the Slope Indicator Company of Seattle, Washington and a fiberglass measuring tape with markings for tenths and hundredths of a foot.

A map of the location of the monitoring wells is located in **Appendix I** as **Figure 1**. A table of the results of the measurements is included in **Appendix II** as **Table 1**.

A map depicting the static water table was not created for this report. The repair of MW #1 changed the elevation of the wellhead so as to make the survey data inaccurate. Without accurate well elevations a map of the static water table could not be created.

### **IV. Groundwater Sampling**

The wells were opened and purged before sampling. Purging of the wells was performed using disposable teflon bailers. Three volumes of the groundwater in the well were purged from the well prior to sampling.

The water from the purging of the wells was stored on-site at Anco until laboratory analysis could determine the character of the waste. The purging water was stored in a closed plastic lined cardboard drum.

Each sample was collected in two (2) forty milliliter (40 ml) vials. The samples were labeled with the sample identification, date, time, and sampler initials.

Immediately after labeling, the samples were placed in an insulated cooler containing ice. The samples were presented to a representative of B.E.C. Laboratories, Toledo, Ohio (BEC) on the day of sampling.

## **V. Laboratory Analysis and Results**

Analysis were performed on the samples by BEC. The analysis included EPA Method 8240 for volatile organic compounds.

The results of the analysis are presented in **Table 2a** and **2b** in **Appendix II**. A copy of the laboratory results and chain of custody documentation is located in **Appendix III**.

A level of 7.87 parts per billion (ppb) of Tetrahydrofuran (THF), was detected in the sample collected from MW #1. This chemical was not detected in groundwater samples collected previously. A Material Safety Data Sheet (MSDS) for THF is included in **Appendix IV** for reference.

As stated before, personnel from Anco repaired the top portion of MW #1. THF is used in Polyvinyl Chloride (PVC) glues. Al Guantanio confirmed that glue was used to repair MW #1.

## **VI. Conclusions and Recommendations**

### **Conclusions**

1. The levels of contamination in the samples are approximately equal to those from the previous sampling. Historically, levels have generally decreased over time. There is no known information to account for the lack of change in the contamination levels.
2. Tetrahydrofuran (THF) was detected in monitoring well one (MW #1). The well was recently repaired with a THF containing glue. It is the opinion of ISES that the source of the THF in the groundwater is most likely from the glue used to repair the well.

## Recommendations

1. The locks were removed from the wells and could not be located. ISES recommends that new locks be purchased and be used to secure the monitoring wells. The locks are necessary to ensure that access to the wells is limited to Anco approved personnel.

All companies should try to protect to their physical assets and limit possible liabilities. Industrial sabotage by disgruntled employees can cause extreme financial hardship even in cases where the criminal is apprehended. Although simple precautions cannot stop a determined criminal, they can hinder and discourage most individuals inclined to cause your company harm.

2. Levels of contamination are still sufficient to pose an environmental detriment to the value of the Anco property. As such, ISES recommends that the annual sampling and analysis of groundwater continue.

It cannot be determined from the available data why the level of contamination has not decreased. The contamination levels have generally decreased during the monitoring of the groundwater.

3. The presence of THF in the groundwater sample should not be considered serious as the concentration is low. The most likely source, the well repair glue, is small in quantity and the level should drop off if the glue is truly the source.

There is currently no Federal Drinking Water standard for the chemical. It is therefore unnecessary to report the detection of THF in groundwater. If glue is the source of the THF, the groundwater sampling and analysis performed next year will most likely show that THF is not present in the groundwater in detectable levels.

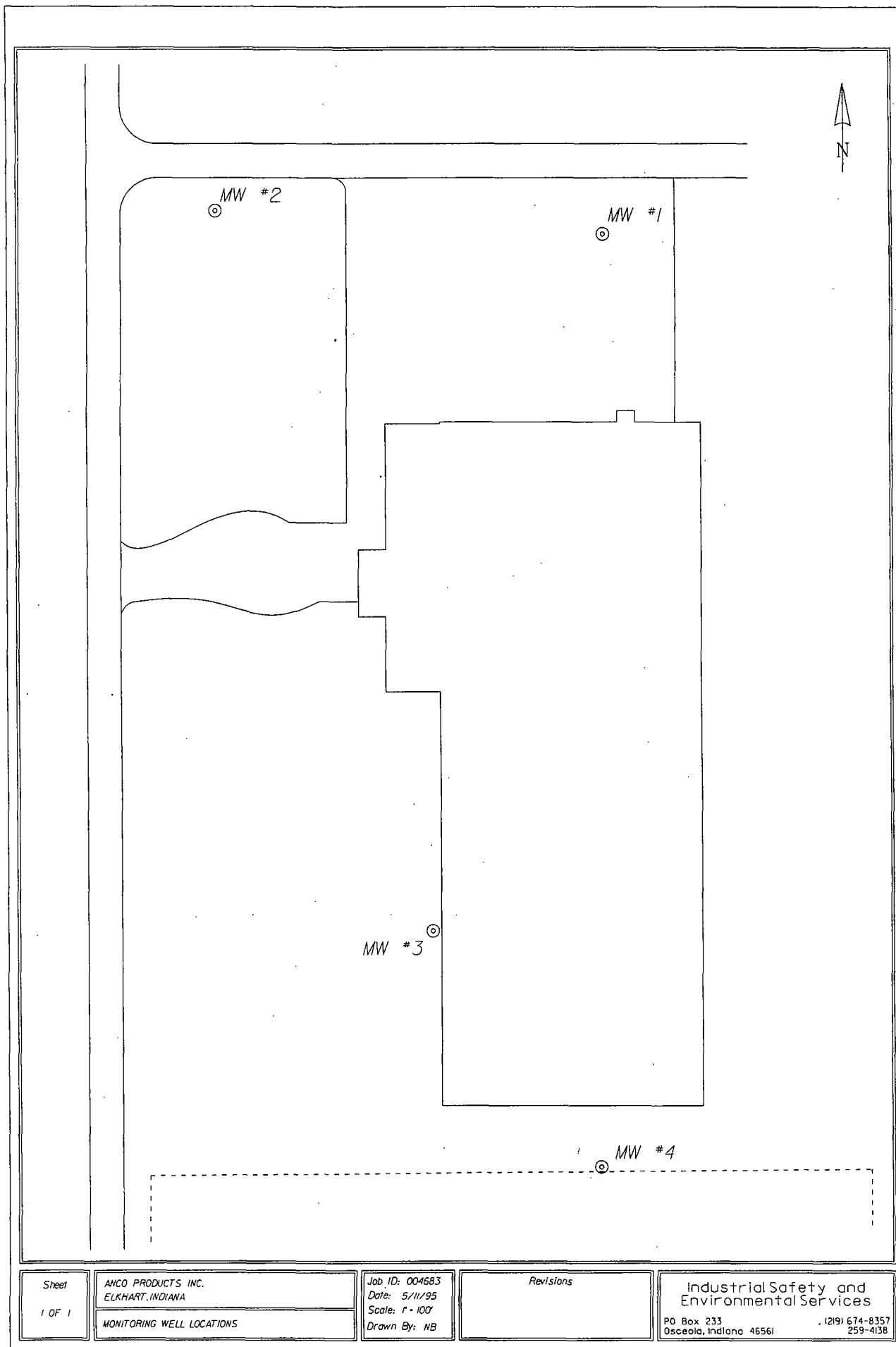
## **VII. Limitations of Assessment**

This assessment was performed in a manner consistent with standards typically applied to a basic statement of professional opinion. The assessment is based partially on information obtained from others and Industrial Safety and Environmental Services makes no representation or warranty concerning the accuracy or completeness of this analysis.

Some information, recommendations, and suggestions contained within this report may be subject to interpretation and differing conclusions are possible. The information contained in this report was developed from information available at the time the report was compiled. Industrial Safety and Environmental Services does not assume liability for financial or other losses or subsequent damage caused by or related to any use of this document.

## Appendix I





## **Appendix II**

**Table 1 - Static Water Level Determinations**

Monitoring Well	Well Elevation	Depth to Groundwater	Static Water Level
MW #1	97.03	13.73	83.30
MW #2	100.00	17.02	82.98
MW #3	101.26	17.50	83.76
MW #4	100.53	18.47	82.06

All levels in feet. All elevations based on assumed MW #2 elevation of 100.00 ft.

\* Wellhead repair may have caused elevation change

**Table 2a - 1,1,1 Trichloroethane (TCA)**

Well	1990	1991	1993	1994	1995
MW #1	ND	9.8	ND	ND	ND
MW #2	ND	3.1	ND	ND	ND
MW #3	4.7	ND	3.1	3	3.17
MW #4	2.6	1.2	3.6	1	2.36

All results in parts per billion (ppb)

**Table 2b - Trichloroethene (TCE)**

Well	1990	1991	1993	1994	1995
MW #1	22	13	17	22	25.4
MW #2	81	8.5	38	22	22.9
MW #3	6.9	64	6.8	5	5.16
MW #4	8.9	20	14	11	6.56

All results in parts per billion (ppb)

## Appendix III

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FAX: (216) 425-1349

lab no.  
95T05525  
p.o. no.

rev: 0

**SAMPLE**

DESCRIPTION: Anco - grab - MW # 3 G. water - 4/3/95 @ 11:00

ANALYSIS: VOA

PROCEDURE: The sample was analyzed as outlined in US EPA "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, Third Edition, November, 1986, Method 8260.

**RESULTS:**

<u>COMPOUND</u>	<u>LOW LEVEL</u>	
	<u>METHOD</u>	<u>PQL (ug/L)</u>
		<u>RESULT (ug/L)</u>
Acrolein	10	< 10
Acrylonitrile	10	< 10
Acetone	10	< 10
Benzene	1	< 1
Bromodichloromethane	1	< 1
Bromoform	1	< 1
Bromomethane	1	< 1
2-Butanone (MEK)	10	< 10
Carbon disulfide	1	< 1
Carbon tetrachloride	1	< 1
Chlorobenzene	1	< 1
Chlorodibromomethane	1	< 1
Chloroethane	2	< 2
2-Chloroethyl Vinyl Ether	2	< 2
Chloroform	1	< 1
Chloromethane	1	< 1
1,2-Dibromoethane (EDB)	1	< 1
Dibromomethane	1	< 1
1,2-Dichlorobenzene	1	< 1
1,3-Dichlorobenzene	1	< 1
1,4-Dichlorobenzene	1	< 1
1,4-Dichloro-2-butene	2	< 2
Dichlorodifluoromethane	1	< 1
1,1-Dichloroethane	1	< 1
1,2-Dichloroethane	1	< 1

date completed:  
04/07/95

tech:  
JM

approved by:

A handwritten signature in dark ink, appearing to read "J. E. Shuff", is written over a horizontal line.

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lab no. 95T05525
p.o. no.

rev: 0

**SAMPLE**

DESCRIPTION: Anco - grab - MW # 3 G. water - 4/3/95 @ 11:00

ANALYSIS: VOA

RESULTS: continued

<u>COMPOUND</u>	<u>LOW LEVEL METHOD PQL (ug/L)</u>	<u>RESULT (ug/L)</u>
1,1-Dichloroethene	1	< 1
cis-1,2-Dichloroethene	1	< 1
trans-1,2-Dichloroethene	1	< 1
1,2-Dichloropropane	1	< 1
cis-1,3-Dichloropropene	1	< 1
trans-1,3-Dichloropropene	1	< 1
Ethyl Acetate	1	< 1
Ethyl Benzene	1	< 1
Ethyl Ether	2	< 2
Ethyl methacrylate	1	< 1
2-Hexanone	2	< 2
Methylene Chloride	1	< 1
Methyl iodide	1	< 1
4-Methyl-2-pentanone (MIBK)	10	< 10
Naphthalene	1	< 1
Styrene	1	< 1
1,1,1,2-Tetrachloroethane	1	< 1
1,1,2,2-Tetrachloroethane	1	< 1
Tetrachloroethene	1	< 1
Tetrahydrofuran	1	< 1
Toluene	1	< 1
1,1,1-Trichloroethane	1	3.17
1,1,2-Trichloroethane	1	< 1
Trichloroethene	1	5.16
Trichlorofluoromethane	1	< 1

date completed:  
04/07/95

tech:  
JM

approved by:

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lab no.
95T05525
p.o. no.

rev: 0

SAMPLE

DESCRIPTION: Anco - grab - MW # 3 G. water - 4/3/95 @ 11:00

ANALYSIS: VOA

RESULTS: continued

COMPOUND	LOW LEVEL	
	METHOD PQL (ug/L)	RESULT (ug/L)
1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon 113)	1	< 1
1,2,3-Trichloropropane	1	< 1
Vinyl acetate	2	< 2
Vinyl chloride	1	< 1
m & p-Xylenes	1	< 1
o-Xylenes	1	< 1

SURROGATES:	Compound	% Recovery	Acceptable Range
	1,2-Dichloroethane-d4	109	76-114
	Toluene-d8	103	88-110
	4-Bromofluorobenzene	102	86-115

1) A value reported as "less than" indicates the analyte was not detected. The number is the quantification limit for the sample.

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04/07/95

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JM

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lab no.
95T05524
p.o. no.

rev: 0

**SAMPLE**

DESCRIPTION: Anco - grab - MW # 2 G. water - 4/3/95 @ 10:39

**ANALYSIS:** VOA

**PROCEDURE:** The sample was analyzed as outlined in US EPA "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, Third Edition, November, 1986, Method 8260.

**RESULTS:**

<u>COMPOUND</u>	<u>LOW LEVEL METHOD PQL (ug/L)</u>	<u>RESULT (ug/L)</u>
Acrolein	10	< 10
Acrylonitrile	10	< 10
Acetone	10	< 10
Benzene	1	< 1
Bromodichloromethane	1	< 1
Bromoform	1	< 1
Bromomethane	1	< 1
2-Butanone (MEK)	10	< 10
Carbon disulfide	1	< 1
Carbon tetrachloride	1	< 1
Chlorobenzene	1	< 1
Chlorodibromomethane	1	< 1
Chloroethane	2	< 2
2-Chloroethyl Vinyl Ether	2	< 2
Chloroform	1	< 1
Chloromethane	1	< 1
1,2-Dibromoethane (EDB)	1	< 1
Dibromomethane	1	< 1
1,2-Dichlorobenzene	1	< 1
1,3-Dichlorobenzene	1	< 1
1,4-Dichlorobenzene	1	< 1
1,4-Dichloro-2-butene	2	< 2
Dichlorodifluoromethane	1	< 1
1,1-Dichloroethane	1	< 1
1,2-Dichloroethane	1	< 1

date completed:  
04/10/95

tech:  
PDB/KJY

approved by:

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lab no.

95T05524

p.o. no.

rev: 0

SAMPLE

DESCRIPTION: Anco - grab - MW # 2 G. water - 4/3/95 @ 10:39

ANALYSIS: VOA

RESULTS: continued

COMPOUND	LOW LEVEL	
	METHOD	PQL (ug/L)
		RESULT (ug/L)
1,1-Dichloroethene	1	< 1
cis-1,2-Dichloroethene	1	< 1
trans-1,2-Dichloroethene	1	< 1
1,2-Dichloropropane	1	< 1
cis-1,3-Dichloropropene	1	< 1
trans-1,3-Dichloropropene	1	< 1
Ethyl Acetate	1	< 1
Ethyl Benzene	1	< 1
Ethyl Ether	2	< 2
Ethyl methacrylate	1	< 1
2-Hexanone	2	< 2
Methylene Chloride	1	< 1
Methyl iodide	1	< 1
4-Methyl-2-pentanone (MIBK)	10	< 10
Naphthalene	1	< 1
Styrene	1	< 1
1,1,1,2-Tetrachloroethane	1	< 1
1,1,2,2-Tetrachloroethane	1	< 1
Tetrachloroethene	1	< 1
Tetrahydrofuran	1	< 1
Toluene	1	< 1
1,1,1-Trichloroethane	1	< 1
1,1,2-Trichloroethane	1	< 1
Trichloroethene	1	22.9
Trichlorofluoromethane	1	< 1

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p.o. no.

rev: 0

SAMPLE

DESCRIPTION: Anco - grab - MW # 2 G. water - 4/3/95 @ 10:39

ANALYSIS: VOA

RESULTS: continued

COMPOUND	LOW LEVEL	
	METHOD PQL (ug/L)	RESULT (ug/L)
1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon 113)	1	< 1
1,2,3-Trichloropropane	1	< 1
Vinyl acetate	2	< 2
Vinyl chloride	1	< 1
m & p-Xylenes	1	< 1
o-Xylenes	1	< 1

SURROGATES:	Compound	% Recovery	Acceptable Range
	1,2-Dichloroethane-d4	106	76-114
	Toluene-d8	96.6	88-110
	4-Bromofluorobenzene	99.2	86-115

1) A value reported as "less than" indicates the analyte was not detected. The number is the quantification limit for the sample.

Date completed:  
04/10/95

tech:  
PDB/KJY

approved by:

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lab no.
95T05526
p.o. no.

rev: 0

**SAMPLE**

DESCRIPTION: Anco - grab - MW # 4 G. water - 4/3/95 @ 11:25

ANALYSIS: VOA

PROCEDURE: The sample was analyzed as outlined in US EPA "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, Third Edition, November, 1986, Method 8260.

**RESULTS:**

<u>COMPOUND</u>	<u>LOW LEVEL METHOD PQL (ug/L)</u>	<u>RESULT (ug/L)</u>
Acrolein	10	< 10
Acrylonitrile	10	< 10
Acetone	10	< 10
Benzene	1	< 1
Bromodichloromethane	1	< 1
Bromoform	1	< 1
Bromomethane	1	< 1
2-Butanone (MEK)	10	< 10
Carbon disulfide	1	< 1
Carbon tetrachloride	1	< 1
Chlorobenzene	1	< 1
Chlorodibromomethane	1	< 1
Chloroethane	2	< 2
2-Chloroethyl Vinyl Ether	2	< 2
Chloroform	1	< 1
Chloromethane	1	< 1
1,2-Dibromoethane (EDB)	1	< 1
Dibromomethane	1	< 1
1,2-Dichlorobenzene	1	< 1
1,3-Dichlorobenzene	1	< 1
1,4-Dichlorobenzene	1	< 1
1,4-Dichloro-2-butene	2	< 2
Dichlorodifluoromethane	1	< 1
1,1-Dichloroethane	1	< 1
1,2-Dichloroethane	1	< 1

date completed:

04/10/95

tech:

JM/KJY

approved by:

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lab no.
95T05526
p.o. no.

rev: 0

**SAMPLE**

**DESCRIPTION:** Anco - grab - MW # 4 G. water - 4/3/95 @ 11:25

**ANALYSIS:** VOA

**RESULTS:** continued

<u>COMPOUND</u>	<u>LOW LEVEL METHOD PQL (ug/L)</u>	<u>RESULT (ug/L)</u>
1,1-Dichloroethene	1	< 1
cis-1,2-Dichloroethene	1	< 1
trans-1,2-Dichloroethene	1	< 1
1,2-Dichloropropane	1	< 1
cis-1,3-Dichloropropene	1	< 1
trans-1,3-Dichloropropene	1	< 1
Ethyl Acetate	1	< 1
Ethyl Benzene	1	< 1
Ethyl Ether	2	< 2
Ethyl methacrylate	1	< 1
2-Hexanone	2	< 2
Methylene Chloride	1	< 1
Methyl iodide	1	< 1
4-Methyl-2-pentanone (MIBK)	10	< 10
Naphthalene	1	< 1
Styrene	1	< 1
1,1,1,2-Tetrachloroethane	1	< 1
1,1,2,2-Tetrachloroethane	1	< 1
Tetrachloroethene	1	< 1
Tetrahydrofuran	1	< 1
Toluene	1	< 1
1,1,1-Trichloroethane	1	2.36
1,1,2-Trichloroethane	1	< 1
Trichloroethene	1	6.56
Trichlorofluoromethane	1	< 1

date completed:  
04/10/95

tech:  
JM/KJY

approved by:

A handwritten signature in black ink, appearing to read "J. E. Ruff", is written over the "approved by:" label.

Industrial Safety and Environmental  
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PHONE: (216) 425-8200  
FAX: (216) 425-1349

lab no.	95T05526
p.o. no.	

rev: 0

SAMPLE

DESCRIPTION: Anco - grab - MW # 4 G. water - 4/3/95 @ 11:25

ANALYSIS: VOA

RESULTS: continued

<u>COMPOUND</u>	<u>LOW LEVEL</u>	
	<u>METHOD PQL (ug/L)</u>	<u>RESULT (ug/L)</u>
1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon 113)	1	< 1
1,2,3-Trichloropropane	1	< 1
Vinyl acetate	2	< 2
Vinyl chloride	1	< 1
m & p-Xylenes	1	< 1
o-Xylenes	1	< 1

<u>SURROGATES:</u>	<u>Compound</u>	<u>% Recovery</u>	<u>Acceptable Range</u>
	1,2-Dichloroethane-d4	111	76-114
	Toluene-d8	105	88-110
	4-Bromofluorobenzene	105	86-115

1) A value reported as "less than" indicates the analyte was not detected. The number is the quantification limit for the sample.

Date completed:  
04/10/95

tech:  
JM/KJY

approved by:

A handwritten signature in black ink, appearing to read "J. E. Buff", is written over a horizontal line.

SAMPLE MAY BE RETURNED TO CLIENT AT BEC's DISCRETION, UNLESS ARRANGEMENTS HAVE BEEN MADE PRIOR TO SAMPLE SUBMISSION.

Industrial Safety and Environmental  
P.O. Box 233

Osceola, IN 46561  
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FAX: (216) 425-1349

lab no.  
**95T06066**  
p.o. no.

rev: 0

**SAMPLE**

**DESCRIPTION:** Anco - grab - MW # 1 - 4/14/95 @ 13:49

**ANALYSIS:** VOA

**PROCEDURE:** The sample was analyzed as outlined in US EPA "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, Third Edition, November, 1986, Method 8240.

**RESULTS:**

<u>COMPOUND</u>	<u>LOW LEVEL</u>	
	<u>METHOD</u>	<u>PQL (ug/L)</u>
		<u>RESULT (ug/L)</u>
Acrolein	10	< 10
Acrylonitrile	10	< 10
Acetone	10	< 10
Benzene	1	< 1
Bromodichloromethane	1	< 1
Bromoform	1	< 1
Bromomethane	1	< 1
2-Butanone (MEK)	10	< 10
Carbon disulfide	1	< 1
Carbon tetrachloride	1	< 1
Chlorobenzene	1	< 1
Chlorodibromomethane	1	< 1
Chloroethane	2	< 2
2-Chloroethyl Vinyl Ether	2	< 2
Chloroform	1	< 1
Chloromethane	1	< 1
1,2-Dibromoethane (EDB)	1	< 1
Dibromomethane	1	< 1
1,2-Dichlorobenzene	1	< 1
1,3-Dichlorobenzene	1	< 1
1,4-Dichlorobenzene	1	< 1
1,4-Dichloro-2-butene	2	< 2
Dichlorodifluoromethane	1	< 1
1,1-Dichloroethane	1	< 1
1,2-Dichloroethane	1	< 1

Date completed:

04/18/95

tech:

JM

approved by:

*Margaret H. Rayner*

Industrial Safety and Environmental  
P.O. Box 233



Osceola, IN 46561  
ATTN: Nathan Bair

HEADQUARTERS/LABORATORY  
705 FRONT STREET  
TOLEDO, OHIO 43605  
PHONE: (419) 693-5307  
FAX: (419) 691-0418

ENVIRONMENTAL LABORATORY  
1632 ENTERPRISE PARKWAY  
TWINSBURG, OHIO 44087  
PHONE: (216) 425-8200  
FAX: (216) 425-1349

lab no.  
**95T06066**  
p.o. no.

rev: 0

**SAMPLE**

**DESCRIPTION:** Anco - grab - MW # 1 - 4/14/95 @ 13:49

**ANALYSIS:** VOA

**RESULTS:** continued

<u>COMPOUND</u>	<u>LOW LEVEL METHOD PQL (ug/L)</u>	<u>RESULT (ug/L)</u>
1,1-Dichloroethene	1	< 1
cis-1,2-Dichloroethene	1	< 1
trans-1,2-Dichloroethene	1	< 1
1,2-Dichloropropane	1	< 1
cis-1,3-Dichloropropene	1	< 1
trans-1,3-Dichloropropene	1	< 1
Ethyl Acetate	1	< 1
Ethyl Benzene	1	< 1
Ethyl Ether	2	< 2
Ethyl methacrylate	1	< 1
2-Hexanone	2	< 2
Methylene Chloride	1	< 1
Methyl iodide	1	< 1
4-Methyl-2-pentanone (MIBK)	10	< 10
Naphthalene	1	< 1
Styrene	1	< 1
1,1,1,2-Tetrachloroethane	1	< 1
1,1,2,2-Tetrachloroethane	1	< 1
Tetrachloroethene	1	< 1
Tetrahydrofuran	1	7.87
Toluene	1	< 1
1,1,1-Trichloroethane	1	< 1 (0.520)
1,1,2-Trichloroethane	1	< 1
Trichloroethene	1	25.4
Trichlorofluoromethane	1	< 1

date completed:

04/18/95

tech:

JM

approved by:

*Margaret H. Rayner*



Industrial Safety and Environmental  
P.O. Box 233

Osceola, IN 46561  
ATTN: Nathan Bair



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lab no.	95T06066
p.o. no.	

rev: 0

SAMPLE

DESCRIPTION: Anco - grab - MW # 1 - 4/14/95 @ 13:49

ANALYSIS: VOA

RESULTS: continued

COMPOUND	LOW LEVEL	
	METHOD POL (ug/L)	RESULT (ug/L)
1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon 113)	1	< 1
1,2,3-Trichloropropane	1	< 1
Vinyl acetate	2	< 2
Vinyl chloride	1	< 1
m & p-Xylenes	1	< 1
o-Xylenes	1	< 1

TURROGATES:	Compound	% Recovery	Acceptable Range
	1,2-Dichloroethane-d4	90.2	76-114
	Toluene-d8	100	88-110
	4-Bromofluorobenzene	98.8	86-115

- 1) A value reported as "less than" indicates the analyte was not detected. The number is the quantification limit for the sample.
- 2) A value in parenthesis following a "less than" value indicates the analyte was detectable but below the limit of quantification. The value is an estimate only.

date completed:  
04/18/95

tech:  
JM

approved by:

*Margaret Laguerre*

**SAMPLE MAY BE RETURNED TO CLIENT AT BEC'S DISCRETION, UNLESS ARRANGEMENTS HAVE BEEN MADE PRIOR TO SAMPLE SUBMISSION.**

## **Appendix IV**

**Section 1. Material Identification**

39

**Tetrahydrofuran (CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>O)** Description: Derived by catalytic hydrogenation of maleic anhydride or furan (with a nickel catalyst), or by acid-catalyzed dehydration of 1,4-butanediol. To prevent peroxide formation, it is stabilized with 0.025% butylated hydroxytoluene, 0.05 to 1% *p*-cresol, 0.05 to 1% hydroquinone, or 0.01 to 1% 4,4'-thiobis (6-*t*-butyl-*m*-cresol). Used as a solvent in histological techniques or for high polymers such as polyvinyl chloride; as a reaction medium for Grignard and metal hydride reactions; for synthesis of butyrolactone, succinic acid, and 1,4-butanediol diacetate; in topcoating solutions, polymer coatings, cellophane, lacquers, magnetic tapes, and printing inks; in food packaging as long as residual amount is < 1.5% of the film; and as a Lewis base to moderate the extreme reactivity of sulfur trioxide.

**Other Designations:** CAS No. 109-99-9, butylene oxide, cyclotetramethylene oxide, diethylene oxide, 1,4-epoxybutane, Furanidine, hydrofuran, NCI-C60560, oxacyclopentane, Oxolane, tetramethylene oxide, THF.

**Manufacturer:** Contact your supplier or distributor. Consult latest *Chemical Week Buyers' Guide*<sup>(73)</sup> for a suppliers list.

**Cautions:** THF in concentrations greater than 20% are irritating to the eyes, nose, and respiratory tract. It produces central nervous system (CNS) depression from inhalation of high concentrations. Tetrahydrofuran is highly flammable and forms explosive peroxides when uninhibited and exposed to air. Use with care!

R 2  
I 2  
S 3  
K 4HMIS  
H 2  
F 3  
R 2  
PPE\*  
\* Sec. 8**Section 2. Ingredients and Occupational Exposure Limits**

Tetrahydrofuran, ca &lt;99%

**1991 OSHA PELs**8-hr TWA: 200 ppm (590 mg/m<sup>3</sup>)15-min STEL: 250 ppm (735 mg/m<sup>3</sup>)**1990 IDLH Level**

20,000 ppm

**1991-92 ACGIH TLVs**TWA: 200 ppm (590 mg/m<sup>3</sup>)STEL: 250 ppm (737 mg/m<sup>3</sup>)**1990 DFG (Germany) MAK**Ceiling: 200 ppm (590 mg/m<sup>3</sup>)

Category II: Substances with systemic effects

Half-life: 2 hr to shift end

Peak Exposure Limit: 1000 ppm,  
30 min average value, 2/shift**1985-86 Toxicity Data\***Human, inhalation, TC<sub>Lo</sub>: 25,000 ppm caused general anesthesia.Rat, oral, LD<sub>50</sub>: 2816 mg/kg; no toxic effect notedRat, inhalation, LC<sub>50</sub>: 21,000 ppm/3 hr produced sleep, respiratory stimulation, and nausea or vomiting.**1990 NIOSH RELs**TWA: 200 ppm (590 mg/m<sup>3</sup>)STEL: 250 ppm (735 mg/m<sup>3</sup>)\* See NIOSH, *RTECS* (LU5950000), for additional mutation and toxicity data.**Section 3. Physical Data****Boiling Point:** 151 °F (66 °C)**Melting Point:** -163 °F (-108 °C)**Relative Evaporation Rate (BuAc = 1):** 8**Odor Threshold:** 30 to 60 ppm**Surface Tension:** 28 dyne/cm at 68 °F (20 °C)**Ionization Potential:** 9.45 eV**Critical Temperature:** 512.6 °F (267 °C)**Critical Pressure:** 51.2 atm**Viscosity:** 0.48 cP at 68 °F (20 °C)**Molecular Weight:** 72.12**Density:** 0.8892 at 68 °F (20/4 °C)**Water Solubility:** Soluble, 30% at 77 °F (25 °C)**Other Solubilities:** Soluble in alcohol, ketones, esters, ethers, and hydrocarbons.**Refraction Index:** 1.4070 at 68 °F (20 °C)**Vapor Pressure:** 114 mm Hg at 59 °F (15 °C); 145 mm Hg at 68 °F (20 °C)**Saturated Vapor Density (Air = 0.075 lb/ft<sup>3</sup> or 1.2 kg/m<sup>3</sup>):** 0.096 lb/ft<sup>3</sup> or 1.539 kg/m<sup>3</sup>**pH:** ~ 7 (aqueous solution)**Appearance and Odor:** Water-white to clear liquid with a fruity odor and pungent taste.**Section 4. Fire and Explosion Data****Flash Point:** 5 °F (-15 °C) OC**Autoignition Temperature:** 610 °F (321 °C)**LEL:** 2% v/v**UEL:** 11.8% v/v

**Extinguishing Media:** THF is a Class 1B Flammable Liquid. For small fires, use dry chemical, carbon dioxide, water spray, or 'alcohol-resistant' foam. For large fires, use water spray, fog, or 'alcohol-resistant' foam. **Unusual Fire or Explosion Hazards:** Vapors may travel to an ignition source and flash back. Containers may rupture in fire. Burning rate = 4.7 mm/min. Uninhibited THF forms explosive peroxides in air. Due to its volatility, even dilute THF-water mixtures present a fire hazard. **Special Fire-fighting Procedures:** Because fire may produce toxic thermal decomposition products, wear a self-contained breathing apparatus (SCBA) with a full facepiece operated in pressure-demand or positive-pressure mode. Structural firefighters' protective clothing provides only limited protection. If fire becomes uncontrollable, evacuate for a 1500 ft radius. If possible without risk, move container from fire area or apply cooling water to sides of container until well after fire is out. Stay away from ends of tanks. For massive fire in cargo area, use monitor nozzles or unmanned hose holders; if impossible, withdraw and let fire burn. Withdraw from fire if you hear a rising sound from venting safety device or notice any tank discoloration due to fire. Do not release runoff from fire control methods to sewers or waterways.

**Section 5. Reactivity Data**

**Stability/Polymerization:** THF forms explosive (>1%) peroxides when exposed to air or sunlight. It is inhibited (Sec. 1) to prevent peroxide formation. Hazardous polymerization may occur in the presence of cationic initiators such as strong proton acids or selected Lewis acids. **Chemical Incompatibilities:** THF will attack some forms of plastics, rubber, and coatings. It is explosive with potassium hydroxide, sodium hydroxide, and sodium tetrahydroaluminate since caustic alkalis deplete the inhibitor; reacts with potassium dioxide 2-aminophenol to form an explosive product; reacts violently with metal halides; forms explosive hydrogen gas with borane or lithium tetrahydroaluminate and reacts vigorously with bromine and calcium hydride + heat. Also incompatible with sulfinyl chloride and oxidizing materials. **Conditions to Avoid:** Exposure to heat, ignition sources, and incompatibles. **Hazardous Products of Decomposition:** Thermal oxidative decomposition of THF can produce carbon oxides and irritating vapors. **Other:** Because distillation or alkali treatment of stabilized THF removes the involatile antioxidant, it must be restabilized or stored under nitrogen to prevent peroxide formation. Do not store more than a few days without a stabilizer. Sodium benzophenone ketyl or an activated alumina column have been used to remove moisture and peroxides. Peroxides may also be destroyed by passage through activated carbon at 86 to 154 °F (20 to 66 °C) with contact time > 2 min. Only use lithium tetrahydroaluminate for drying THF if it is peroxide-free and not glossy wet. Distill only in presence of a reducing agent such as ferrous sulfate, since peroxide explosions have occurred.

Continue on next page

**Section 6. Health Hazard Data**

**Carcinogenicity:** The IARC,<sup>(164)</sup> NTP,<sup>(169)</sup> and OSHA<sup>(164)</sup> do not list THF as a carcinogen. **Summary of Risks:** THF is a strong skin and mucous membrane irritant when present at levels > 20% but it is not a sensitizer. Effects in humans are not well known due to a lack of exposure data. CNS depression is seen in exposure to high concentrations. Liver and kidney damage occurred in animals but recent attempts to confirm these reports have failed. Thus, the liver and kidney damage has been attributed to impurities present in the THF used in older experiments. Even so, some authorities still recommend monitoring kidney and liver function in exposed persons. **Medical Conditions Aggravated by Long-Term Exposure:** Skin diseases. **Target Organs:** Eyes, CNS, skin, respiratory system. **Primary Entry Routes:** Inhalation, skin contact. **Acute Effects:** Vapor inhalation of high concentrations can cause slight smarting of the eyes or respiratory system as well as cough and chest pain. Inhalation of 25,000 ppm can cause anesthesia which may last 6 to 8 hr. Investigators testing pharmacological properties have reported severe occipital headache, nausea, and dizziness; these are easily reversible in fresh air. A marked decrease in WBC count was observed in researchers involved in experimental spinning of synthetic fibers (made from polyvinyl chloride with THF as a solvent). Recovery occurred after 2 years treatment with cystin, liver prepare, and vitamins B & C. Alcoholic beverages appear to enhance THF toxicity. **Chronic Effects:** Possible liver and kidney damage.

**FIRST AID** **Eyes:** Do not allow victim to rub or keep eyes tightly shut. Gently lift eyelids and flush immediately and continuously with flooding amounts of water until transported to an emergency medical facility. Consult a physician immediately. **Skin:** Quickly remove contaminated clothing. Rinse with flooding amounts of water for at least 15 min. Wash exposed area with soap and water. **Inhalation:** Remove exposed person to fresh air, support breathing and administer 100% humidified supplemental oxygen if needed. **Ingestion:** Never give anything by mouth to an unconscious or convulsing person. Contact a poison control center and unless otherwise advised, have that *conscious and alert* person drink 1 to 2 glasses of water to dilute. Gastric lavage is indicated if performed soon after ingestion or in patients at risk of convulsing.

**Note to Physicians:** Even though THF's effect on the liver and kidneys is uncertain, it is suggested that renal and hepatic function be monitored, especially AST, ALT, and GGT. If gastric lavage is performed protect airway by placement in Trendelenburg and left lateral decubitus position or by cuffed endotracheal intubation.

**Section 7. Spill, Leak, and Disposal Procedures**

**Spill/Leak:** Notify safety personnel, isolate and ventilate area, deny entry, and stay upwind. Shut off all ignition sources. Cleanup personnel should protect against vapor inhalation and skin/eye contact. Use water spray to reduce vapor and form nonflammable mixtures. Take up small spills with earth, sand, vermiculite, or other absorbent, noncombustible material and place in suitable containers. Dike far ahead of large spills for later reclamation or disposal. Report any release in excess of 1000 lb. Follow applicable OSHA regulations (29 CFR 1910.120). **Ecotoxicity Values:** Blue-green algae, growth inhibition microcystis = 225 mg/L (pH 7); Protozoa, cell multiplication inhibition test = 858 mg/L. **Environmental Degradation:** In air, THF photodegrades by reaction with hydroxyl radicals with an estimated half-life of hrs to a few days. It is soluble and expected to wash out in rain. In water, its fate is uncertain. Based on very limited evidence THF is expected to biodegrade and not absorb to sediment. Tests in distilled water showed THF to last as follows: 0.5 mg/L for 1 to 2 days, 5 mg/L for 6 to 8 days, and 10 mg/L for 10 days.

**Disposal:** A good candidate for rotary kiln incineration at 1508 to 2912 °F (820 to 1600 °C), for liquid injection incineration at 1202 to 2912 °F (650 to 1600 °C), and fluidized bed incineration at 842 to 1796 °F (450 to 980 °C). Contact your supplier or a licensed contractor for detailed recommendations. Follow applicable Federal, state, and local regulations.

**OSHA Designations**

Listed as an Air Contaminant (29 CFR 1910.1000, Table Z-1-A)

**EPA Designations**

Listed as a RCRA Hazardous Waste (40 CFR 261.33): No. U213

SARA Extremely Hazardous Substance (40 CFR 355), TPQ: Not listed

SARA Toxic Chemical (40 CFR 372.65): Not listed

Listed as a CERCLA Hazardous Substance\* (40 CFR 302.4): Final Reportable Quantity (RQ), 1000 lb (454 kg) [\* per CWA, Sec. 311 (b)(4)]

**Section 8. Special Protection Data**

**Goggles:** Wear protective eyeglasses, chemical safety goggles, or faceshields per OSHA eye- and face-protection regulations (29 CFR 1910.133). Because contact lens use in industry is controversial, establish your own policy. **Respirator:** Seek professional advice prior to respirator selection and use. Follow OSHA respirator regulations (29 CFR 1910.134) and, if necessary, wear a MSHA/NIOSH-approved respirator. For <1000 ppm, use any powered air-purifying respirator with organic vapor cartridge. For <5000 ppm, use any supplied-air respirator (SAR) operated in continuous flow mode. For <10,000 ppm, use any SAR or SCBA with a full facepiece. For <20,000 ppm, use any SAR operated in pressure demand or positive pressure mode. For emergency or nonroutine operations (cleaning spills, reactor vessels, or storage tanks), wear an SCBA.

**Warning!** Air-purifying respirators do not protect workers in oxygen-deficient atmospheres. If respirators are used, OSHA requires a written respiratory protection program that includes at least: medical certification, training, fit-testing, periodic environmental monitoring, maintenance, inspection, cleaning, and convenient, sanitary storage areas. **Other:** Wear chemically protective gloves, boots, aprons, and gauntlets made of butyl rubber or neoprene to prevent skin contact. **Ventilation:** Provide general and local exhaust ventilation systems to maintain airborne concentrations below the OSHA PELs (Sec. 2). Local exhaust ventilation is preferred because it prevents contaminant dispersion into the work area by controlling it at its source.<sup>(103)</sup> **Safety Stations:** Make available in the work area emergency eyewash stations, safety/quick-drench showers, and washing facilities. **Contaminated Equipment:** Separate contaminated work clothes from street clothes and launder before reuse. Remove this material from your shoes and clean PPE. **Comments:** Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics.

**Section 9. Special Precautions and Comments**

**Storage Requirements:** Store in dark glass bottles or steel drums in a cool, dry, well-ventilated area away from heat, oxidizing materials and sunlight. Outside or detached storage is preferred; if inside, keep in a standard flammable liquids storage room or cabinet. Use Class 1, Group C electrical equipment. Regularly check inhibitor levels to maintain peroxide level below 1%. Before use, test for absence of peroxides with potassium iodide-starch paper. Electrically ground and bond all equipment used with THF. In addition, provide jumpers at swing joints and other necessary locations to give a ground circuit of low resistance. Restabilize and store THF that has been recovered for reuse under a blanket of dry nitrogen gas. **Engineering Controls:** To reduce potential health hazards, use sufficient dilution or local exhaust ventilation to control airborne contaminants and to maintain concentrations at the lowest practical level. **Administrative Controls:** Consider preplacement and periodic medical exams of exposed workers with emphasis on the skin, eyes, CNS, and respiratory system.

**Transportation Data (49 CFR 172.101)**

**DOT Shipping Name:** Tetrahydrofuran

**DOT Hazard Class:** 3

**ID No.:** UN2056

**DOT Packing Group:** II

**DOT Label:** Flammable Liquid

**Special Provisions (172.102):** T8

**Packaging Authorizations**

a) Exceptions: None

b) Non-bulk Packaging: 173.202

c) Bulk Packaging: 173.242

**Quantity Limitations**

a) Passenger Aircraft or Railcar: 5 L

b) Cargo Aircraft Only: 60 L

**Vessel Stowage Requirements**

a) Vessel Stowage: B

b) Other: --

**MSDS Collection References:** 1, 73, 89, 100, 101, 103, 124, 126, 127, 132, 139, 148, 149, 153, 159, 162, 163, 164, 167, 168, 171

**Prepared by:** M Gannon, BA; **Industrial Hygiene Review:** D Wilson, CIH; **Medical Review:** AC Darlington, MPH, MD



**Anco Products Inc.  
2500 South 17th Street  
Elkhart, Indiana**

**1999 Groundwater Sampling and Analysis**

*As Prepared November 10, 1999 By:  
Industrial Safety and Environmental Services (ISES)  
716 Lincoln Way West  
Osceola, Indiana 46561*



"We put you in compliance"

30723 Old US 20 West, Elkhart, IN 46517, P.O. Box 233, Osceola, IN 46561  
Phone (219) 674-8357 • Fax (219) 674-6166 • ISES@I-S-E-S.com

---

November 10, 1999

Ray Plagens  
Anco Products, Inc.  
2500 South 17th Street  
Elkhart, Indiana 46517

Dear Ray:

Enclosed you will find laboratory reports covering the October 1999 annual monitoring well sampling at Anco. The project was performed per your request submitted to Tris Gour, Randy Martin, and myself at our office on October 20, 1999.

The sample results have changed significantly since the last sampling event in 1995. Generally concentrations of Trichloroethene (TCE) still exceed the federal drinking water limit in MWs 1,2, and 4, but concentrations for 1,1,1 Trichloroethane (TCA) have reduced to levels below laboratory detection limits (non-detect) in all four wells. This appears to indicate that the plume has moved such that Anco is now in the plume "tail" as it moves offsite.

ISES was unable to recalculate ground water gradient and direction since our records indicate a change in top of well casing (TOC) elevation has occurred due to the casing repairs performed on MW-1 and there are no available records to indicate an updated TOC elevation survey has occurred. ISES would be pleased to provide this service once the well repairs are completed.

Thank you for the opportunity to service your environmental consulting requirements. If you have any questions or concerns about this years results or the monitoring wells in general please call.

Truly Yours,

Alan G. Esko  
Environmental Consultant  
Industrial Safety and Environmental Services

Enclosures: 1as

Compliance File: Environmental / Groundwater / 1999



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## **Executive Summary**

The levels of contamination in the recent samples have changed significantly to those from the previous sampling event in 1995. Generally concentrations of Trichloroethene (TCE) still exceed the federal drinking water Maximum Contaminant Levels (MCLs) in MWs 1,2, and 4, but concentrations for 1,1,1 Trichloroethane (TCA) have reduced to levels below laboratory detection limits (non-detect) in all four wells. The concentration of TCE has also reduced below the laboratory detection limit in MW-3. This appears to indicate that the plume has moved such that Anco is now in the plume "tail" as it moves offsite. This professional opinion cannot, however, be proven ground water gradient and direction calculations cannot be verified from the recent water level measurements.

The groundwater contamination is still above federal drinking water MCLs, yet below the Voluntary Remediation Program (VRP) Tier II Non-Residential and the proposed Risk Interagated System of Cleanups (RISC) Tier I Default cleanup objectives. The contamination does not appear to be an environmental detriment to the value of the property. The discontinuing of annual monitoring should be considered if API is not receiving groundwater as a potable resource and the monitoring is voluntary.

MW-1 was observed to be unsecure, requiring well protection repairs. Repairs details recommendations are to be found in the body of this text.

## I. Introduction

This report was generated by Industrial Safety and Environmental Services (ISES), Elkhart, Indiana, for Anco Products Inc. (Anco), Elkhart, Indiana. Annual sampling of the monitoring wells was recommended to, and authorized by Ray Plagens.

This report details the results from the sampling of groundwater performed on October 28, 1999.

## II. Monitoring Well Conditions

All four wells were inspected prior to sampling and measurement. The condition of each well was assessed to ascertain whether repair was required.

The monitoring wells (MWs) 2,3 and 4 appeared to be in good working order. MW-1 was unsecure since it did not have a well cap or a protective cover attached to the well casing. MW-1 repair to reinstall a protective flush mount cover and locking well cap is required. MWs 2,3, and 4 had locks but client supplied keys would not work for MWs 3 and 4, therefore ISES needed to gain access by cutting off those MW's locks. ISES recommends three new "keyed-alike" locks be installed on the previously referenced MWs. ISES recommends to have these repairs performed as soon as possible to prevent tampering and vandalism. The above referenced verbal observations were given to Ray Plagens before ISES departed the site on the day of the sampling event.

## III. Measurement of Static Water Levels

The static water level in the wells was measured before the wells were purged. The measurements were performed using an electronic water level indicator with markings for tenths and hundredths of a foot. Due to the previous well casing repairs to MW-1, ISES is unable to determine water level elevations from MW-1 unless the top of casing (TOC) is re-surveyed. Without accurate TOC well elevations, a ground water table directional map can not be created.

Table 1

October 1999 Water Table Level Measurements				
MW	Well Depth	TOC Elevation	Depth to Groundwater	Water Table Elevations
1	23.35	97.03	14.20'	Not Available
2	25.6	100	17.26'	82.74'
3	25.4	101.26	17.73'	83.53'
4	25.6	100.53	16.69'	83.84'

All distances in feet

## IV. Groundwater Sampling

The wells were purged before sampling. Purging of the wells was performed using disposable polyethylene bailers. Three to five well casing volumes of groundwater were purged prior to sampling.

The collected purge water from the the wells was disposed on-site, near each particular MW.

Each sample was collected in two (2) forty milliliter (40 ml) laboratory supplied prepreserved vials. The samples were labeled with the project name, sample identification, date and time of sampling, and sampler initials.

Immediately after sample collection, the samples were placed in an insulated cooler containing ice to maintain the required temperature. The samples were shipped "priority overnight" to Test America, Inc. laboratories, Indianapolis, IN on the day of sampling.

## V. Laboratory Analysis and Results

Volatile Organic Compound (VOC) analysis was performed in accordance to EPA Method 8260, by Test America, Inc.

A historic summary of the analytical results, from 1995 to present, is presented in **Table 3**. A copy of the recent laboratory reports and chain of custody documentation is located in **Appendix I**.

**Table 3**

WELL	1995		1996		1999	
	TCA	TCE	TCA	TCE	TCA	TCE
MW #1	ND	25.4	ND	26.9	ND	37.0
MW #2	ND	22.9	ND	17.7	ND	12.0
MW #3	3.17	5.16	2.20	4.30	ND	ND
MW #4	2.36	6.56	1.50	6.80	ND	6.7
Drinking Water MCL	200	5	200	5	200	5

All levels in micrograms per liter (ug/l) which is equivalent to parts per billion (ppb)

MW Monitoring Well

TCA 1,1,1 Trichloroethane

TCE Trichloroethene

## **VI. Conclusions and Recommendations**

The levels of contamination in the recent samples have changed significantly to those from the previous sampling event in 1995. Generally concentrations of Trichloroethene (TCE) still exceed the federal drinking water Maximum Contaminant Levels (MCLs) in MWs 1,2, and 4, but concentrations for 1,1,1 Trichloroethane (TCA) have reduced to levels below laboratory detection limits (non-detect) in all four wells. The concentration of TCE has also reduced below the laboratory detection limit in MW-3. This appears to indicate that the plume has moved such that Anco is now in the plume "tail" as it moves offsite. This professional opinion cannot, however, be proven ground water gradient and direction calculations cannot be verified from the recent water level measurements.

The groundwater contamination is still above federal drinking water MCLs, yet below the Voluntary Remediation Program (VRP) Tier II Non-Residential and the proposed Risk Interagated System of Cleanups (RISC) Tier I Default cleanup objectives. The contamination does not appear to be an environmental detriment to the value of the property. The discontinuing of annual monitoring should be considered if API is not receiving groundwater as a potable resource and the monitoring is voluntary.

MW-1 was observed to be unsecure, requiring well protection repairs. Repairs details recommendations are to be found in the body of this text.

## **VII. Limitations of Assessment**

This assessment was performed in a manner consistent with standards typically applied to a basic statement of professional opinion. The assessment is based partially on information obtained from others and Industrial Safety and Environmental Services makes no representation or warranty concerning the accuracy or completeness of this analysis.

Some information, recommendations, and suggestions contained within this report may be subject to interpretation and differing conclusions are possible. The information contained in this report was developed from information available at the time the report was compiled. Industrial Safety and Environmental Services does not assume liability for financial or other losses or subsequent damage caused by or related to any use of this document.

### **VIII. Signatorial**

Industrial Safety and Environmental Safety was glad to perform this action for Anco Products Incorporated. If you have any questions or concerns regarding this issue, please feel free to contact our office at your convenience.

Sincerely,

A handwritten signature in cursive script, reading "Alan G. Esko", is written over a horizontal line.

Alan G. Esko  
Environmental Consultant  
Industrial Safety and Environmental Services

November 10, 1999

## **IX. Appendices**



## ANALYTICAL REPORT

Mr. Alan Esko  
INDUSTRIAL SAFETY AND  
ENVIRONMENTAL  
30723 Old US Highway 20  
Elkhart, IN 46514

11/03/1999

Job Number: 99.06259  
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Enclosed are the Analytical Results for the following samples submitted to TestAmerica, Inc. Indianapolis Division for analysis:

Project Description: API ANNUAL SAMPLING - ELKHART

Sample Number	Sample Description	Date Taken	Date Received
251593	MW-1	10/28/1999	10/29/1999
251594	MW-2	10/28/1999	10/29/1999
251595	MW-3	10/28/1999	10/29/1999
251596	MW-4	10/28/1999	10/29/1999

TestAmerica, Inc. certifies that the analytical results contained herein apply only to the specific samples analyzed.

Reproduction of this analytical report is permitted only in its entirety.

  
Project Representative

## ANALYTICAL REPORT

Mr. Alan Esko  
INDUSTRIAL SAFETY AND  
ENVIRONMENTAL  
30723 Old US Highway 20  
Elkhart, IN 46514

11/03/1999

Job No.: 99.06259  
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Job Description: API ANNUAL SAMPLING - ELKHART

Sample Number / Sample I.D.			Sample Date/	Analyst &		Reporting
Parameters	Result	Flag	Units	Date Analyzed	Method	Limit
251593	MW-1		10/28/1999			
VOLATILES-8260 (AQ)				/		
Acetone	<50		ug/L	aka / 11/02/1999	SW 8260B	<50
Acrolein	<250		ug/L	aka / 11/02/1999	SW 8260B	<250
Acrylonitrile	<250		ug/L	aka / 11/02/1999	SW 8260B	<250
Benzene	<5.0		ug/L	aka / 11/02/1999	SW 8260B	<5.0
Bromobenzene	<5.0		ug/L	aka / 11/02/1999	SW 8260B	<5.0
Bromochloromethane	<5.0		ug/L	aka / 11/02/1999	SW 8260B	<5.0
Bromodichloromethane	<5.0		ug/L	aka / 11/02/1999	SW 8260B	<5.0
Bromoform	<5.0		ug/L	aka / 11/02/1999	SW 8260B	<5.0
Bromomethane	<10.		ug/L	aka / 11/02/1999	SW 8260B	<10.
n-Butylbenzene	<5.0		ug/L	aka / 11/02/1999	SW 8260B	<5.0
sec-Butylbenzene	<5.0		ug/L	aka / 11/02/1999	SW 8260B	<5.0
tert-Butylbenzene	<5.0		ug/L	aka / 11/02/1999	SW 8260B	<5.0
Carbon disulfide	<5.0		ug/L	aka / 11/02/1999	SW 8260B	<5.0
Carbon tetrachloride	<5.0		ug/L	aka / 11/02/1999	SW 8260B	<5.0
Chlorobenzene	<5.0		ug/L	aka / 11/02/1999	SW 8260B	<5.0
Chlorodibromomethane	<5.0		ug/L	aka / 11/02/1999	SW 8260B	<5.0
Chloroethane	<10.		ug/L	aka / 11/02/1999	SW 8260B	<10.
Chloroform	<20		ug/L	aka / 11/02/1999	SW 8260B	<20
Chloromethane	<10.		ug/L	aka / 11/02/1999	SW 8260B	<10.
2-Chlorotoluene	<5.0		ug/L	aka / 11/02/1999	SW 8260B	<5.0
4-Chlorotoluene	<5.0		ug/L	aka / 11/02/1999	SW 8260B	<5.0
2-Chloroethyl vinyl ether	<50.		ug/L	aka / 11/02/1999	SW 8260B	<50.
1,2-Dibromo-3-chloropropane	<50.		ug/L	aka / 11/02/1999	SW 8260B	<50.

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Mr. Alan Esko  
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Job Description: API ANNUAL SAMPLING - ELKHART

Sample Number / Sample I.D.			Sample Date/	Analyst &		Reporting
Parameters	Result	Flag	Units	Date Analyzed	Method	Limit
251593	MW-1		10/28/1999			
1,2-Dibromoethane (EDB)	<5.0		ug/L	aka / 11/02/1999	SW 8260B	<5.0
Dibromomethane	<10.		ug/L	aka / 11/02/1999	SW 8260B	<10.
1,2-Dichlorobenzene	<5.0		ug/L	aka / 11/02/1999	SW 8260B	<5.0
1,3-Dichlorobenzene	<5.0		ug/L	aka / 11/02/1999	SW 8260B	<5.0
1,4-Dichlorobenzene	<5.0		ug/L	aka / 11/02/1999	SW 8260B	<5.0
Dichlorodifluoromethane	<10		ug/L	aka / 11/02/1999	SW 8260B	<10
trans-1,4-Dichloro-2-butene	<50		ug/L	aka / 11/02/1999	SW 8260B	<50
1,1-Dichloroethane	<5.0		ug/L	aka / 11/02/1999	SW 8260B	<5.0
1,2-Dichloroethane	<5.0		ug/L	aka / 11/02/1999	SW 8260B	<5.0
1,1-Dichloroethene	<5.0		ug/L	aka / 11/02/1999	SW 8260B	<5.0
cis-1,2-Dichloroethene	<5.0		ug/L	aka / 11/02/1999	SW 8260B	<5.0
trans-1,2-Dichloroethene	<5.0		ug/L	aka / 11/02/1999	SW 8260B	<5.0
1,2-Dichloropropane	<5.0		ug/L	aka / 11/02/1999	SW 8260B	<5.0
1,3-Dichloropropane	<5.0		ug/L	aka / 11/02/1999	SW 8260B	<5.0
2,2-Dichloropropane	<5.0		ug/L	aka / 11/02/1999	SW 8260B	<5.0
1,1-Dichloropropene	<5.0		ug/L	aka / 11/02/1999	SW 8260B	<5.0
cis-1,3-Dichloropropene	<5.0		ug/L	aka / 11/02/1999	SW 8260B	<5.0
trans-1,3-Dichloropropene	<5.0		ug/L	aka / 11/02/1999	SW 8260B	<5.0
Ethylbenzene	<5.0		ug/L	aka / 11/02/1999	SW 8260B	<5.0
Ethyl methacrylate	<10.		ug/L	aka / 11/02/1999	SW 8260B	<10.
2-Hexanone	<50.		ug/L	aka / 11/02/1999	SW 8260B	<50.
Hexachlorobutadiene	<5.0		ug/L	aka / 11/02/1999	SW 8260B	<5.0
Iodomethane	<10.		ug/L	aka / 11/02/1999	SW 8260B	<10.
Isopropylbenzene	<5.0		ug/L	aka / 11/02/1999	SW 8260B	<5.0

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Job Description: API ANNUAL SAMPLING - ELKHART

Sample Number / Sample I.D.			Sample Date/	Analyst &		Reporting
Parameters	Result	Flag	Units	Date Analyzed	Method	Limit
251593	MW-1		10/28/1999			
p-Isopropyltoluene	<5.0		ug/L	aka / 11/02/1999	SW 8260B	<5.0
Methylene chloride	<10.		ug/L	aka / 11/02/1999	SW 8260B	<10.
Methyl-ethyl-ketone (MEK)	<50.		ug/L	aka / 11/02/1999	SW 8260B	<50.
Methyl-tert-butyl ether (MTBE)	<10.		ug/L	aka / 11/02/1999	SW 8260B	<10.
4-Methyl-2-pentanone (MIBK)	<50.		ug/L	aka / 11/02/1999	SW 8260B	<50.
Naphthalene	<5.0		ug/L	aka / 11/02/1999	SW 8260B	<5.0
n-Propylbenzene	<5.0		ug/L	aka / 11/02/1999	SW 8260B	<5.0
Styrene	<5.0		ug/L	aka / 11/02/1999	SW 8260B	<5.0
1,1,1,2-Tetrachloroethane	<5.0		ug/L	aka / 11/02/1999	SW 8260B	<5.0
1,1,2,2-Tetrachloroethane	<5.0		ug/L	aka / 11/02/1999	SW 8260B	<5.0
Tetrachloroethene	<5.0		ug/L	aka / 11/02/1999	SW 8260B	<5.0
Toluene	<5.0		ug/L	aka / 11/02/1999	SW 8260B	<5.0
1,2,3-Trichlorobenzene	<5.0		ug/L	aka / 11/02/1999	SW 8260B	<5.0
1,2,4-Trichlorobenzene	<5.0		ug/L	aka / 11/02/1999	SW 8260B	<5.0
1,1,1-Trichloroethane	<5.0		ug/L	aka / 11/02/1999	SW 8260B	<5.0
1,1,2-Trichloroethane	<5.0		ug/L	aka / 11/02/1999	SW 8260B	<5.0
Trichloroethene	37.		ug/L	aka / 11/02/1999	SW 8260B	<5.0
Trichlorofluoromethane	<5.0		ug/L	aka / 11/02/1999	SW 8260B	<5.0
1,2,3-Trichloropropane	<5.0		ug/L	aka / 11/02/1999	SW 8260B	<5.0
1,2,4-Trimethylbenzene	<5.0		ug/L	aka / 11/02/1999	SW 8260B	<5.0
1,3,5-Trimethylbenzene	<5.0		ug/L	aka / 11/02/1999	SW 8260B	<5.0
Vinyl acetate	<10.		ug/L	aka / 11/02/1999	SW 8260B	<10.
Vinyl chloride	<5.0		ug/L	aka / 11/02/1999	SW 8260B	<5.0
Xylenes, (Total)	<5.0		ug/L	aka / 11/02/1999	SW 8260B	<5.0

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Job Description: API ANNUAL SAMPLING - ELKHART

Sample Number / Sample I.D.	Sample Date/	Analyst &	Reporting
Parameters	Units	Date Analyzed	Limit
251593	MW-1	10/28/1999	
SURR: Toluene-d8	95	75-132%	aka / 11/02/1999
SURR: Dibromofluoromethane	96	91-114%	aka / 11/02/1999
SURR: 4-Bromofluorobenzene	97	87-132%	aka / 11/02/1999
			SW 8260B
			SW 8260B
			SW 8260B

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Sample Number / Sample I.D.			Sample Date/	Analyst &		Reporting
Parameters	Result	Flag	Units	Date Analyzed	Method	Limit
251594	MW-2		10/28/1999			
VOLATILES-8260 (AQ)				/		
Acetone	<50		ug/L	aka / 10/30/1999	SW 8260B	<50
Acrolein	<250		ug/L	aka / 10/30/1999	SW 8260B	<250
Acrylonitrile	<250		ug/L	aka / 10/30/1999	SW 8260B	<250
Benzene	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
Bromobenzene	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
Bromochloromethane	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
Bromodichloromethane	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
Bromoform	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
Bromomethane	<10.		ug/L	aka / 10/30/1999	SW 8260B	<10.
n-Butylbenzene	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
sec-Butylbenzene	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
tert-Butylbenzene	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
Carbon disulfide	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
Carbon tetrachloride	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
Chlorobenzene	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
Chlorodibromomethane	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
Chloroethane	<10.		ug/L	aka / 10/30/1999	SW 8260B	<10.
Chloroform	<20		ug/L	aka / 10/30/1999	SW 8260B	<20
Chloromethane	<10.		ug/L	aka / 10/30/1999	SW 8260B	<10.
2-Chlorotoluene	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
4-Chlorotoluene	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
2-Chloroethyl vinyl ether	<50.		ug/L	aka / 10/30/1999	SW 8260B	<50.
1,2-Dibromo-3-chloropropane	<50.		ug/L	aka / 10/30/1999	SW 8260B	<50.

## ANALYTICAL REPORT

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Sample Number / Sample I.D.			Sample Date/	Analyst &		Reporting
Parameters	Result	Flag	Units	Date Analyzed	Method	Limit
251594	MW-2		10/28/1999			
1,2-Dibromoethane (EDB)	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
Dibromomethane	<10.		ug/L	aka / 10/30/1999	SW 8260B	<10.
1,2-Dichlorobenzene	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
1,3-Dichlorobenzene	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
1,4-Dichlorobenzene	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
Dichlorodifluoromethane	<10		ug/L	aka / 10/30/1999	SW 8260B	<10
trans-1,4-Dichloro-2-butene	<50		ug/L	aka / 10/30/1999	SW 8260B	<50
1,1-Dichloroethane	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
1,2-Dichloroethane	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
1,1-Dichloroethene	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
cis-1,2-Dichloroethene	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
trans-1,2-Dichloroethene	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
1,2-Dichloropropane	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
1,3-Dichloropropane	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
2,2-Dichloropropane	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
1,1-Dichloropropene	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
cis-1,3-Dichloropropene	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
trans-1,3-Dichloropropene	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
Ethylbenzene	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
Ethyl methacrylate	<10.		ug/L	aka / 10/30/1999	SW 8260B	<10.
2-Hexanone	<50.		ug/L	aka / 10/30/1999	SW 8260B	<50.
Hexachlorobutadiene	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
Iodomethane	<10.		ug/L	aka / 10/30/1999	SW 8260B	<10.
Isopropylbenzene	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0

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Job Description: API ANNUAL SAMPLING - ELKHART

Sample Number / Sample I.D.			Sample Date/	Analyst &		Reporting
Parameters	Result	Flag	Units	Date Analyzed	Method	Limit
251594	MW-2		10/28/1999			
p-Isopropyltoluene	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
Methylene chloride	<10.		ug/L	aka / 10/30/1999	SW 8260B	<10.
Methyl-ethyl-ketone (MEK)	<50.		ug/L	aka / 10/30/1999	SW 8260B	<50.
Methyl-tert-butyl ether (MTBE)	<10.		ug/L	aka / 10/30/1999	SW 8260B	<10.
4-Methyl-2-pentanone (MIBK)	<50.		ug/L	aka / 10/30/1999	SW 8260B	<50.
Naphthalene	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
n-Propylbenzene	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
Styrene	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
1,1,1,2-Tetrachloroethane	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
1,1,2,2-Tetrachloroethane	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
Tetrachloroethene	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
Toluene	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
1,2,3-Trichlorobenzene	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
1,2,4-Trichlorobenzene	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
1,1,1-Trichloroethane	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
1,1,2-Trichloroethane	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
Trichloroethene	12.		ug/L	aka / 10/30/1999	SW 8260B	<5.0
Trichlorofluoromethane	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
1,2,3-Trichloropropane	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
1,2,4-Trimethylbenzene	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
1,3,5-Trimethylbenzene	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
Vinyl acetate	<10.		ug/L	aka / 10/30/1999	SW 8260B	<10.
Vinyl chloride	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
Xylenes, (Total)	<5.0		ug/L	aka / 10/29/1999	SW 8260B	<5.0



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Sample Number / Sample I.D.			Sample Date/ Units	Analyst & Date Analyzed	Method	Reporting Limit
Parameters	Result	Flag				
251594	MW-2		10/28/1999			
SURR: Toluene-d8	98		75-132%	aka / 10/30/1999	SW 8260B	
SURR: Dibromofluoromethane	106.		91-114%	aka / 10/30/1999	SW 8260B	
SURR: 4-Bromofluorobenzene	95		87-132%	aka / 10/30/1999	SW 8260B	

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Sample Number / Sample I.D.			Sample Date/	Analyst &		Reporting
Parameters	Result	Flag	Units	Date Analyzed	Method	Limit
251595	MW-3		10/28/1999			
VOLATILES-8260 (AQ)				/		
Acetone	<50		ug/L	aka / 10/30/1999	SW 8260B	<50
Acrolein	<250		ug/L	aka / 10/30/1999	SW 8260B	<250
Acrylonitrile	<250		ug/L	aka / 10/30/1999	SW 8260B	<250
Benzene	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
Bromobenzene	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
Bromochloromethane	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
Bromodichloromethane	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
Bromoform	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
Bromomethane	<10.		ug/L	aka / 10/30/1999	SW 8260B	<10.
n-Butylbenzene	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
sec-Butylbenzene	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
tert-Butylbenzene	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
Carbon disulfide	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
Carbon tetrachloride	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
Chlorobenzene	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
Chlorodibromomethane	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
Chloroethane	<10.		ug/L	aka / 10/30/1999	SW 8260B	<10.
Chloroform	<20		ug/L	aka / 10/30/1999	SW 8260B	<20
Chloromethane	<10.		ug/L	aka / 10/30/1999	SW 8260B	<10.
2-Chlorotoluene	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
4-Chlorotoluene	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
2-Chloroethyl vinyl ether	<50.		ug/L	aka / 10/30/1999	SW 8260B	<50.
1,2-Dibromo-3-chloropropane	<50.		ug/L	aka / 10/30/1999	SW 8260B	<50.

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Job Description: API ANNUAL SAMPLING - ELKHART

Sample Number / Sample I.D.			Sample Date/	Analyst &		Reporting
Parameters	Result	Flag	Units	Date Analyzed	Method	Limit
251595	MW-3		10/28/1999			
1,2-Dibromoethane (EDB)	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
Dibromomethane	<10.		ug/L	aka / 10/30/1999	SW 8260B	<10.
1,2-Dichlorobenzene	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
1,3-Dichlorobenzene	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
1,4-Dichlorobenzene	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
Dichlorodifluoromethane	<10		ug/L	aka / 10/30/1999	SW 8260B	<10
trans-1,4-Dichloro-2-butene	<50		ug/L	aka / 10/30/1999	SW 8260B	<50
1,1-Dichloroethane	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
1,2-Dichloroethane	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
1,1-Dichloroethene	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
cis-1,2-Dichloroethene	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
trans-1,2-Dichloroethene	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
1,2-Dichloropropane	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
1,3-Dichloropropane	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
2,2-Dichloropropane	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
1,1-Dichloropropene	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
cis-1,3-Dichloropropene	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
trans-1,3-Dichloropropene	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
Ethylbenzene	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
Ethyl methacrylate	<10.		ug/L	aka / 10/30/1999	SW 8260B	<10.
2-Hexanone	<50.		ug/L	aka / 10/30/1999	SW 8260B	<50.
Hexachlorobutadiene	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
Iodomethane	<10.		ug/L	aka / 10/30/1999	SW 8260B	<10.
Isopropylbenzene	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0

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Job Description: API ANNUAL SAMPLING - ELKHART

Sample Number / Sample I.D.			Sample Date/	Analyst &		Reporting
Parameters	Result	Flag	Units	Date Analyzed	Method	Limit
251595	MW-3		10/28/1999			
p-Isopropyltoluene	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
Methylene chloride	<10.		ug/L	aka / 10/30/1999	SW 8260B	<10.
Methyl-ethyl-ketone (MEK)	<50.		ug/L	aka / 10/30/1999	SW 8260B	<50.
Methyl-tert-butyl ether (MTBE)	<10.		ug/L	aka / 10/30/1999	SW 8260B	<10.
4-Methyl-2-pentanone (MIBK)	<50.		ug/L	aka / 10/30/1999	SW 8260B	<50.
Naphthalene	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
n-Propylbenzene	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
Styrene	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
1,1,1,2-Tetrachloroethane	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
1,1,2,2-Tetrachloroethane	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
Tetrachloroethene	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
Toluene	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
1,2,3-Trichlorobenzene	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
1,2,4-Trichlorobenzene	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
1,1,1-Trichloroethane	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
1,1,2-Trichloroethane	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
Trichloroethene	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
Trichlorofluoromethane	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
1,2,3-Trichloropropane	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
1,2,4-Trimethylbenzene	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
1,3,5-Trimethylbenzene	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
Vinyl acetate	<10.		ug/L	aka / 10/30/1999	SW 8260B	<10.
Vinyl chloride	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
Xylenes, (Total)	<5.0		ug/L	aka / 10/29/1999	SW 8260B	<5.0

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Job Description: API ANNUAL SAMPLING - ELKHART

Sample Number / Sample I.D.	Result	Flag	Sample Date/ Units	Analyst & Date Analyzed	Method	Reporting Limit
251595	MW-3		10/28/1999			
SURR: Toluene-d8	94		75-132%	aka / 10/30/1999	SW 8260B	
SURR: Dibromofluoromethane	106.		91-114%	aka / 10/30/1999	SW 8260B	
SURR: 4-Bromofluorobenzene	98		87-132%	aka / 10/30/1999	SW 8260B	

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Sample Number / Sample I.D.			Sample Date/	Analyst &		Reporting
Parameters	Result	Flag	Units	Date Analyzed	Method	Limit
251596	MW-4		10/28/1999			
VOLATILES-8260 (AQ)				/		
Acetone	<50		ug/L	aka / 10/30/1999	SW 8260B	<50
Acrolein	<250		ug/L	aka / 10/30/1999	SW 8260B	<250
Acrylonitrile	<250		ug/L	aka / 10/30/1999	SW 8260B	<250
Benzene	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
Bromobenzene	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
Bromochloromethane	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
Bromodichloromethane	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
Bromoform	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
Bromomethane	<10.		ug/L	aka / 10/30/1999	SW 8260B	<10.
n-Butylbenzene	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
sec-Butylbenzene	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
tert-Butylbenzene	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
Carbon disulfide	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
Carbon tetrachloride	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
Chlorobenzene	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
Chlorodibromomethane	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
Chloroethane	<10.		ug/L	aka / 10/30/1999	SW 8260B	<10.
Chloroform	<20		ug/L	aka / 10/30/1999	SW 8260B	<20
Chloromethane	<10.		ug/L	aka / 10/30/1999	SW 8260B	<10.
2-Chlorotoluene	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
4-Chlorotoluene	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
2-Chloroethyl vinyl ether	<50.		ug/L	aka / 10/30/1999	SW 8260B	<50.
1,2-Dibromo-3-chloropropane	<50.		ug/L	aka / 10/30/1999	SW 8260B	<50.

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Sample Number / Sample I.D.			Sample Date/	Analyst &		Reporting
Parameters	Result	Flag	Units	Date Analyzed	Method	Limit
251596	MW-4		10/28/1999			
1,2-Dibromoethane (EDB)	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
Dibromomethane	<10.		ug/L	aka / 10/30/1999	SW 8260B	<10.
1,2-Dichlorobenzene	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
1,3-Dichlorobenzene	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
1,4-Dichlorobenzene	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
Dichlorodifluoromethane	<10		ug/L	aka / 10/30/1999	SW 8260B	<10
trans-1,4-Dichloro-2-butene	<50		ug/L	aka / 10/30/1999	SW 8260B	<50
1,1-Dichloroethane	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
1,2-Dichloroethane	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
1,1-Dichloroethene	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
cis-1,2-Dichloroethene	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
trans-1,2-Dichloroethene	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
1,2-Dichloropropane	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
1,3-Dichloropropane	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
2,2-Dichloropropane	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
1,1-Dichloropropene	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
cis-1,3-Dichloropropene	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
trans-1,3-Dichloropropene	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
Ethylbenzene	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
Ethyl methacrylate	<10.		ug/L	aka / 10/30/1999	SW 8260B	<10.
2-Hexanone	<50.		ug/L	aka / 10/30/1999	SW 8260B	<50.
Hexachlorobutadiene	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
Iodomethane	<10.		ug/L	aka / 10/30/1999	SW 8260B	<10.
Isopropylbenzene	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0

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Sample Number / Sample I.D.			Sample Date/	Analyst &		Reporting
Parameters	Result	Flag	Units	Date Analyzed	Method	Limit
251596	MW-4		10/28/1999			
p-Isopropyltoluene	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
Methylene chloride	<10.		ug/L	aka / 10/30/1999	SW 8260B	<10.
Methyl-ethyl-ketone (MEK)	<50.		ug/L	aka / 10/30/1999	SW 8260B	<50.
Methyl-tert-butyl ether (MTBE)	<10.		ug/L	aka / 10/30/1999	SW 8260B	<10.
4-Methyl-2-pentanone (MIBK)	<50.		ug/L	aka / 10/30/1999	SW 8260B	<50.
Naphthalene	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
n-Propylbenzene	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
Styrene	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
1,1,1,2-Tetrachloroethane	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
1,1,2,2-Tetrachloroethane	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
Tetrachloroethene	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
Toluene	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
1,2,3-Trichlorobenzene	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
1,2,4-Trichlorobenzene	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
1,1,1-Trichloroethane	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
1,1,2-Trichloroethane	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
Trichloroethene	6.7		ug/L	aka / 10/30/1999	SW 8260B	<5.0
Trichlorofluoromethane	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
1,2,3-Trichloropropane	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
1,2,4-Trimethylbenzene	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
1,3,5-Trimethylbenzene	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
Vinyl acetate	<10.		ug/L	aka / 10/30/1999	SW 8260B	<10.
Vinyl chloride	<5.0		ug/L	aka / 10/30/1999	SW 8260B	<5.0
Xylenes, (Total)	<5.0		ug/L	aka / 10/29/1999	SW 8260B	<5.0



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Sample Number / Sample I.D.			Sample Date/	Analyst &		Reporting
Parameters	Result	Flag	Units	Date Analyzed	Method	Limit
251596	MW-4		10/28/1999			
SURR: Toluene-d8	94		75-132%	aka / 10/30/1999	SW 8260B	
SURR: Dibromofluoromethane	101.		91-114%	aka / 10/30/1999	SW 8260B	
SURR: 4-Bromofluorobenzene	97		87-132%	aka / 10/30/1999	SW 8260B	

## KEY TO ABBREVIATIONS

<	Less than; when appearing in the result column, indicates analyte not detected at or above the Reporting Limit.
%	Percent; To convert ppm to %, divide result by 10,000. To convert % to ppm, multiply the result by 10,000.
*	Indicates the Reporting Limit is elevated due to insufficient sample volume.
mg/L	Part per million; Concentration in units of milligrams of analyte per Liter of aqueous sample.
ug/L	Part per billion; Concentration in units of micrograms of analyte per Liter of aqueous sample.
mg/kg	Part per million; Concentration in units of milligrams of analyte per kilogram of non-aqueous sample.
ug/kg	Part per billion; Concentration in units of micrograms of analyte per kilogram of non-aqueous sample.
a	Indicates the sample concentration was quantitated using a diesel fuel standard.
b	Indicates the analyte of interest was also found in the method blank.
c	Sample resembles unknown Hydrocarbon.
dw	When indicated, the result is reported on a dry weight basis. The contribution of the moisture content in the sample has been subtracted when calculating the concentration.
d1	Indicates the analyte has elevated Reporting Limit due to high concentration.
d2	Indicates the analyte has elevated Reporting Limit due to matrix.
e	Indicates the reported concentration is estimated.
f	Indicates the sample concentration was quantitated using a fuel oil standard.
g	Indicates the sample concentration was quantitated using a gasoline standard.
h	Indicates the sample was analyzed past recommended holding time.
i	Insufficient spike concentration due to high analyte concentration in the sample.
j	Indicates the reported concentration is below the Reporting Limit.
k	Indicates the sample concentration was quantitated using a kerosene standard.
l	Indicates an MS/MSD was not analyzed due to insufficient sample. An LCS / LCS Duplicate provided for precision.
m	Indicates the sample concentration was quantitated using a mineral spirits standard.
o	Indicates the sample concentration was quantitated using a motor oil standard.
p	Indicates the sample was post spiked due to sample matrix.
q	Indicates MS/MSD exceeded control limits. All other Quality Control Indicators were in control.
r	Indicates the sample was received past recommended holding time.
s	Indicates the sample concentration was quantitated using a stoddard solvent standard.
u	Indicates the sample was received improperly preserved and/or improperly contained.
uj	Indicates the result is below the Reporting Limit and is considered estimated.

